



## Site Characterization Report

Former AlliedSignal Laminate Systems –  
Mechanic St. Site (No. 442050)

Village of Hoosick Falls  
Rensselaer County, New York

5 August 2020

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## Signature Page

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Former AlliedSignal Laminate Systems – Mechanic St. Site (No. 442050)

I, Chris W. Wenczel, certify that I am currently a Qualified Environmental Professional as defined in 6 NYCRR Part 375 and that this Final Site Characterization Report was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).



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**CONTENTS**

**1. INTRODUCTION ..... 1**

1.1 Purpose & Objectives ..... 1

**2. PROJECT BACKGROUND..... 1**

2.1 Description ..... 1

2.2 Physical Conditions ..... 1

2.2.1 Geological/Hydrogeologic Setting ..... 1

2.2.2 Topography ..... 2

2.2.3 Soil ..... 2

2.2.4 Surface Waters ..... 2

2.2.5 Local Potable Water Sources ..... 2

2.3 Investigative History ..... 2

**3. SITE CHARACTERIZATION METHODS ..... 4**

3.1 Standards, Criteria and Guidance ..... 4

3.1.1 Groundwater ..... 4

3.1.2 Soil ..... 5

3.2 Records Search ..... 5

3.3 Subsurface Utility Location ..... 5

3.4 Decontamination ..... 5

3.5 Surface and Near-Surface Soil Sampling ..... 6

3.6 Soil Borings and Subsurface Soil Sampling ..... 6

3.7 Soil Sampling for Additional Delineation ..... 7

3.8 Groundwater Monitoring Well Installations ..... 7

3.9 Groundwater Sampling ..... 8

3.10 Sample Analyses ..... 8

3.11 Potential Underground Storage Tank Location ..... 10

3.12 Investigative Derived Wastes ..... 10

3.13 Community Air Monitoring Plan ..... 11

3.14 Deviations from the Work Plan ..... 11

**4. SITE CHARACTERIZATION RESULTS ..... 12**

4.1 Geology and Hydrogeology ..... 12

4.2 Sample Results ..... 12

4.2.1 PFOA and Other PFAS ..... 13

4.2.2 Volatile Organic Compounds (VOCs) ..... 13

4.2.3 Semi-volatile Organic Compounds (SVOCs) ..... 14

4.2.4 Metals ..... 14

4.2.5 Total Cyanide ..... 15

4.2.6 Pesticides ..... 15

4.2.7 Polychlorinated Biphenyls (PCBs) ..... 16

4.2.8 Total Organic Carbon (TOC) and pH ..... 16

4.3 Potential Underground Storage Tank Location ..... 16

4.4 Assessment of Data Quality ..... 16

4.4.1 Data Quality Objectives ..... 16

4.4.2 Data Usability ..... 17

4.5 Investigation Derived Wastes ..... 18

**5. CONCLUSIONS AND RECOMMENDATIONS ..... 19**

**6. REFERENCES CITED..... 20**

## LIST OF FIGURES

- 1 Property Location
- 2 Site Layout
- 3 Typical Stratigraphic Section
- 4 Site Characterization Sample Locations
- 5 Interpolated Overburden Thickness and Cross-Section Locations
- 6 Interpolated Bedrock Surface and Cross-Section Locations
- 7 Geological Cross Section A-A'
- 8 Geological Cross Section B-B'
- 9 Interpolated Potentiometric Contours
- 10 PFOA Results in Soil
- 11 PFOA Results in Groundwater
- 12 VOC Results in Soil
- 13 VOC Results in Groundwater
- 14 SVOC Results in Soil
- 15 SVOC Results in Groundwater
- 16 Metals Results in Soil
- 17 Metals Results in Groundwater
- 18 Pesticide Results in Soil
- 19 Pesticides Results in Groundwater

## LIST OF TABLES

- 1 Summary of Records Search
- 2 Summary of Site Characterization Tasks
- 3 Summary of Site Characterization Samples
- 4 Monitoring Well Construction Details
- 5 Analytical Results for PFOA and Other PFAS, pH and TOC: Soil Samples
- 6 Analytical Results for PFOA and Other PFAS, pH and TOC: Groundwater Samples
- 7 Analytical Results for Metals, Pesticides, PCBs, VOCs and SVOCs: Soil Samples
- 8 Analytical Results for Metals, Pesticides, PCBs, VOCs and SVOCs: Groundwater Samples
- 9 Summary of Analytical Methods
- 10 Investigative Derived Wastes

## LIST OF APPENDICES

- Appendix A SC Geophysical Report
- Appendix B Soil Boring and Well Construction Logs
- Appendix C SC Groundwater Monitoring Well Development and Sampling Records

## ACRONYMS AND ABBREVIATIONS

<b>Name</b>	<b>Description</b>
amsl	above mean sea level
ASP	Analytical Services Protocol
AOPCs	Areas of Potential Concern
bgs	below ground surface
°C	Degrees Celsius
CAMP	Community Air Monitoring Plan
DER	Division of Environmental Remediation
DO	Dissolved Oxygen
DQO	Data Quality Objective
DSNY	Dig Safely New York
DVR	Data Validation Report
EDS	Environmental Data Services, Inc.
ELAP	Environmental Laboratory Approval Program
ERM	ERM Consulting and Engineering, Inc.
GAC	Granular Activated Carbon
GPS	Global Positioning System
HDPE	High Density Polyethylene
IDW	Investigation-Derived Waste
ng/L	Nanograms per liter (parts per trillion)
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
ORP	Oxidation-Reduction Potential
PARCC	Precision, Accuracy, Reproducibility, Completeness, and Comparability
PCBs	Polychlorinated biphenyls
PFAS	Per- and Polyfluoroalkyl Substances
PFHpA	Perfluoroheptanoic acid
PFOA	Perfluorooctanoic acid
PFOS	Perfluorooctane sulfonic acid
PID	Photoionization detector
RI	Remedial Investigation
SC	Site Characterization
SCGs	Standards, Criteria and Guidance
SCOs	Soil Cleanup Objectives
SpC	Specific conductance
SVOCs	Semi-volatile Organic Compounds
TAL	Target Analyte List
TCL	Target Compound List
TOGS	Technical Operations Guidance Series
µg/kg	Micrograms per Kilogram (parts per billion)
µg/L	Micrograms per Liter (parts per billion)
USEPA	United States Environmental Protection Agency
VOCs	Volatile Organic Compounds

## 1. INTRODUCTION

Honeywell International Inc. (Honeywell) entered into an Order on Consent and Administrative Settlement with the New York State Department of Environmental Conservation (NYSDEC) dated 12 October 2017 (the Order; Index Number CO 4-20170516-209) (NYSDEC, 2017). The Order required the performance of a Site Characterization (SC) at the former AlliedSignal Laminate Systems – Mechanic Street (the Site), in the Village of Hoosick Falls (Village), New York. The Site is also known as 1 Mechanic Street. The site is classified as a “P-site” by the NYSDEC, meaning that preliminary information suggests that the site and surrounding areas are contaminated, and that a site characterization is necessary. A Site location map is shown in Figure 1.

This SC Report describes field investigations (the Work) completed to evaluate the physical and chemical characteristics of soil and groundwater at the Site and presents the results along with recommendations based on the available data. Based on the results of the site characterization program, this Site has been adequately characterized and does not appear to be a source of risk for exposure of per- and polyfluoroalkyl substances (PFAS) to human health and the environment.

### 1.1 Purpose & Objectives

The goal of the SC is to provide sufficient information to determine whether the Site meets the New York State’s definition of a hazardous waste disposal site by confirming or denying the presence of hazardous waste and determining whether the Site poses a significant threat to public health or the environment. The need for, and scope of, any additional work is determined based on the SC data compared to applicable NYS Standards, Criteria and Guidance (SCGs) for environmental media.

The Work was completed based on the following NYSDEC-approved work plans:

- Site Characterization Field Sampling and Analysis Plan dated 18 February 2019 (ERM, 2019a);
- Proposed Geophysical Survey for Underground Storage Tanks dated 17 June 2019 (Honeywell 2019a);
- Supplemental Site Characterization (SSC) Sampling and Analysis Plan dated 28 August 2019 (Honeywell, 2019b).

The SC activities included use of surface geophysical techniques, soil borings, overburden monitoring well installations, and collection of soil and groundwater samples for laboratory analyses. This approach provided data on:

- Subsurface geologic/hydrogeologic conditions: the physical and chemical characteristics of overburden soils and groundwater, and the bedrock surface at the Site;
- Underground utilities, e.g., sewer lines, piping, etc.;
- Testing for per- and polyfluoroalkyl substances (PFAS) in soil and groundwater; and
- Testing for Target Compound List (TCL) volatile organic compounds (VOCs), TCL semi-volatile organic compounds (SVOCs), 1,4-dioxane, pesticides, polychlorinated biphenyls (PCBs), Target Analyte List (TAL) metals, and cyanide, total organic carbon (TOC), and pH in soil and overburden groundwater.

## 2. PROJECT BACKGROUND

### 2.1 Description

The Site layout is shown in Figure 2. The Site is comprised of three parcels: 27.15-1-2.1, 27.15-1-2.2 and 27.15-1-7.1 totaling approximately 23.75 acres that include an electrical utility easement and a Village right-of-way for Church Street on the Site (Figure 2). The Site is located at the northern end of Church Street, which enters the property at the intersection of Mechanic Street along the southwestern boundary of the property, on the north side of the Church Street Bridge. The Site is bordered by Mechanic Street on the west and the Hoosic River to the north, south and east.

A prominent ridge trends generally north-west to southeast across most of the Site. The major surface-water feature in the area is the Hoosic River, which flows north-northwest. The Site is located on the inner portion of a horseshoe bend, or meander, in the Hoosic River (Figure 2).

Historical records indicate the property was developed for commercial and/or industrial purposes dating back to the early- to mid-1800s. By 1855, the property was occupied by the Walter Wood Mowing and Reaping Machine Company factory. A massive fire destroyed the factory in November 1860. The factory was rebuilt and another large fire occurred in 1870 and the factory was repaired (Anderson, 1897). The company continued to operate on the property until 1924. The Glastsa Company, a manufacturer of aircraft engines operated on the Site during the 1940s and 1950s. The Village operated a town garage on part of the Site during the 1960s – 1970s (ENSR, 2001). AlliedSignal Laminate Systems, Inc. owned the Site from 1986 to 1999 and manufactured single and multi-layer, copper bonded laminate boards created from resin and fiberglass sheeting used in computer circuit board applications. The product was sold and shipped to vendors in roll-form or packaged sheets.

The developed portion of the Site occupies approximately 5.3 acres and is located at an elevation of approximately 430 feet above mean sea level (amsl). Five buildings of varying size are located at the northern and southern portion of the properties. The two largest structures are referred to as “Riverview I” and “Riverview II”, with two small buildings adjacent to the north side of Riverview I and one building to the northwest of Riverview II (Figure 2). Interior access roads are paved. Grass-covered and wooded areas are present in other portions of the Site. The property extends to the northwest beyond the former drum storage building into a wooded area that contains some small areas of scattered metal debris.

### 2.2 Physical Conditions

#### 2.2.1 Geological/Hydrogeologic Setting

Regional unconsolidated geological material overlying bedrock (collectively referred to as overburden) typically consists of the following:

- Alluvium deposited relatively recently in the Hoosic River valley.
- Glaciolacustrine silt and clay deposited in proglacial lakes.
- Glacial outwash (predominantly sand and gravel) deposited by glacial meltwaters.
- Glacial till, which is typically a dense, compact, poorly sorted mixture of silt, clay, sand, gravel, cobbles and boulders deposited beneath glaciers.

A typical stratigraphic column is presented in Figure 3.

Bedrock in the area consists predominantly of dark gray to black slate mapped by the NYSGS as the Walloomsac Formation (Potter, 1972). The area has been subject to complex structural deformation including folds and thrust faults (Potter, 1972). The resulting bedrock stratigraphy and structural geology of the area is variable and complex.



Groundwater in the unconsolidated overburden flows toward the Hoosic River. Groundwater flow in bedrock occurs predominantly through joints, fractures, faults, and foliation in the bedrock.

### 2.2.2 Topography

Topography in the area of the Village of Hoosick Falls and the surrounding Town of Hoosick is characterized by upland hills on either side of the Hoosic River valley, which generally trends from south-southeast to north-northwest (Figure 2). Elevations in this area range from approximately 400 to 1,200 amsl with the lowest elevations found along the Hoosic River.

The Site is generally flat adjacent to Mechanic Street, but drops off sharply to the Hoosic River to the north, south and east approximately 35 feet below. The Site generally slopes to the north, with an elevation of approximately 430 to 450 feet across the Riverview I and Riverview II area. A prominent ridge with approximately 40 feet of relief trends north-west from Riverview I. The wooded area that occupies the northern area of the Site has more variable topography than the developed Riverview I and II areas that occupy the southern portion of the Site.

### 2.2.3 Soil

Native soils in the area, as mapped by the New York State Geological Survey (NYSGS), are identified as alluvium and lacustrine silt and clay (Caldwell and Dineen, 1987). Localized areas include coarser material soils mapped as sand and gravel (Caldwell and Dineen, 1987).

Near-surface soil at the Site consists of fine to coarse sand and gravel with concrete, slag, brick, ash and glass fragments (historic fill) underlain by clay and silt. Native soil near the Site is identified predominantly as Hamlin silt loam (USDA, 2017).

### 2.2.4 Surface Waters

The only surface water body in the vicinity of the Site is the Hoosic River, which borders the south, east, and north sides of the Site.

### 2.2.5 Local Potable Water Sources

No private or public potable water wells have been identified on-Site or within 0.25 mile of the Site.

The Village of Hoosick Falls' municipal well field is located east of the Hoosic River. The system is classified by the New York State Department of Health (NYSDOH) as "groundwater under the direct influence of surface water". The three currently active wells (well numbers 3, 6 and 7) have total well depths of 55, 59, and 70 feet, respectively (CHA, 2006). The system has an approximate capacity of 1.0 million gallons per day (gpd). Produced water is treated through a membrane filtration plant. Additionally, since February 2016, granular activated carbon (GAC) is utilized to remove perfluorooctanoic acid (PFOA) from the water.

## 2.3 Investigative History

ENSR performed a Phase II ESA for Rütgers AG from February 2000 through March 2001 that included installation and sampling of soil borings and monitoring wells. The results of the subsurface investigations identified metals (arsenic, beryllium, cadmium, copper, lead, nickel, zinc and mercury) and volatile organic compounds (acetone & benzene) in soil exceeding the NYSDEC Soil Cleanup Objectives (SCOs). Concentrations of VOCs and metals in groundwater were below New York State Class GA (potable) Groundwater Standards (ENSR, 2001).

AECOM completed an additional investigation in October 2013 for Oak-Mitsui to evaluate the previously identified areas of potential concern (AOPCs). Additional soil borings and monitoring wells were installed as part of this investigation. Detected concentrations of ten metals (aluminum, antimony, cadmium, calcium, chromium, copper, iron, lead, mercury and zinc)

exceeded the NYSDEC SCOs. Iron was the only compound detected in groundwater above the NYSDEC GA Groundwater Standards (AECOM, 2013).

In November 2016, groundwater samples were collected from two existing wells at the Site in accordance with a NYSDEC-approved scope of work for Honeywell (ERM, 2016a). Six existing monitoring wells were proposed for groundwater sampling based on historic reports; however, only two monitoring wells were found to be available for sample collection. Groundwater samples were analyzed for PFAS (21 analytes), total organic carbon (TOC) and pH and the results were reported to the NYSDEC in a letter dated 22 December 2016 (ERM, 2016b). PFOA was detected in the groundwater samples collected from MW-4 and MW-8 at concentrations of 890 and 2,300 nanograms per liter (ng/L), respectively.

### 3. SITE CHARACTERIZATION METHODS

During 2019, the SC was performed in five separate field mobilizations using environmental investigation methods outlined in the approved work plans (Section 1.1). Investigative methodologies included use of surface geophysical techniques, soil borings, overburden monitoring well installations, and collection of soil and groundwater samples for laboratory analyses. Details regarding these activities are summarized in Table 2. SC sampling locations are shown in Figure 4. Field investigations were completed during the following mobilizations:

- 11 March 2019 – 4 April 2019: Site reconnaissance, utility clearance, soil borings, soil sampling, groundwater monitoring well installations and development;
- 23 – 24 April 2019: Groundwater monitoring well sampling;
- 16 July 2019: Geophysical surveys to confirm the locations of three USTs previously abandoned in-place with NYSDEC approval, and determine if another UST was present in a nearby location on the east side of the Site;
- 4 November 2019: Clearing and grubbing vegetation to provide access to supplemental SC soil sampling locations along the northern portion of the Site, soil borings were located and staked; and
- 3 – 5 December 2019: Shallow delineation soil borings on the northern wooded portion of the Site.

The following sections present summaries of the SCGs that apply to this project, the results of a record search, and the methods used to complete the field investigations.

#### 3.1 Standards, Criteria and Guidance

The following standards and criteria apply to this project.

- 6 NYCRR Part 375 - Environmental Remediation Programs
- 6 NYCRR Part 608 - Use and Protection of Waters
- 6 NYCRR Parts 700-706 - Water Quality Standards
- 29 CFR Part 1910.120 - Hazardous Waste Operations and Emergency Response

The following guidance applies to this project.

- DER-10 – Technical Guidance for Site Investigation and Remediation (May 2010);
- USEPA Drinking Water Health Advisory for PFOA and perfluorooctane sulfonic acid (PFOS) dated May 2016 (USEPA, 2016a);
- NYSDEC Division of Spills Management - Sampling Guidelines and Protocols: Technologies Background and Quality Control/Quality Assurance for the NYSDEC Spill Response Program (NYSDEC, 1992);
- TOGS 1.1.1 - Ambient Water Quality Standards & Guidance Values and Groundwater Effluent Limitations (NYSDEC, 1998); and
- Screening and Assessment of Contaminated Sediment, NYSDEC Division of Fish, Wildlife and Marine Resources, Bureau of Habitat dated 24 June 2014 (NYSDEC 2014).

Sample results were compared to applicable NYS Standards, Criteria and Guidance (SCGs) by media as summarized below.

##### 3.1.1 Groundwater

Groundwater results are compared to NYS Class GA ambient water quality standards and guidance values (NYSDEC, 1998) for target compound list (TCL) and target analyte list (TAL)

constituents. NYS does not have ambient water quality standards or guidance values<sup>1</sup> for PFOA, PFOS, and the other PFAS.

The United States Environmental Protection Agency (USEPA) Lifetime Health Advisories of 70 ng/L for both PFOA and PFOS (individually and in total) are applicable only for drinking water (USEPA, 2016a).

### 3.1.2 Soil

Soil results are compared to NYS Part 375 Soil Cleanup Objectives (SCOs; NYSDEC, 2006) for protection of groundwater and commercial land use for TCL and TAL constituents. NYS does not have SCOs for PFOA, PFOS or other PFAS.

In May 2016, the USEPA issued a site-specific Removal Management Level (RML) for Residential Soil for Hoosick Falls of 1,000 micrograms per kilogram ( $\mu\text{g}/\text{kg}$ ) for the combined level of PFOA and PFOS (USEPA 2016b; USEPA, 2016c). This RML was based on the reference dose used by the USEPA Office of Water to establish the drinking water health advisory of 70 ng/L. This RML was used to screen the soil results.

## 3.2 Records Search

A Records Search and document review was performed in conformance with applicable requirements contained in the Order and Appendix 3A of DER-10 (NYSDEC, 2010a). The Records Search was undertaken to identify relevant historical environmental documentation. A summary of the Records Search is presented in Table 1.

Several prior investigative reports<sup>2</sup>, the Environmental Data Resources (EDR) and the NYSDEC Bulk Storage database records indicate that from 1980 to 1998, three 8,000-gallon single steel-wall underground storage tanks (USTs) were present at the facility and were used to store N,N-dimethylformamide, (DMF), methyl ethyl ketone (MEK), and acetone. The USTs were registered as Site 4-000046: Tanks 01 & 02, and Site 4-000189: Tank 3. The NYSDEC database lists all three tanks as “Underground including vaulted with no access for inspection” and closed in-place with NYSDEC approval in 1998. According to the prior reports, the abandoned USTs are located on the east side of the southernmost building as shown in Figure 4. Periodic vapor monitoring using a photoionization detector and subsequent soil borings, soil and groundwater sampling at the former UST area did not reveal evidence of historic releases (ENSR, 2001).

## 3.3 Subsurface Utility Location

Dig Safely New York (DSNY) was notified prior to the initiation of intrusive activities at the Site and identified, located, and marked utilities in areas proposed for subsurface investigation. New York Leak Detection Inc., a private utility location subcontractor was retained to evaluate proposed drilling locations and a suspect underground storage tank (UST) location using ground-penetrating radar (GPR), magnetometry/metal detection, and inductive cable/pipe location. At minimum, a 10-foot diameter radius around each planned drilling location was scanned for subsurface utilities prior to the initiation of the work. Proposed sampling locations were adjusted in the field, as necessary, based on the results of subsurface clearance efforts.

## 3.4 Decontamination

Temporary decontamination pads were constructed with two layers of polyethylene sheeting bermed at the sides using lumber or other appropriate material. Re-usable drilling and sampling

<sup>1</sup> Ambient water quality, relates to water bodies such as lakes, rivers, and oceans. New York State has developed standards and guidance values for specific classes of fresh and saline surface waters and fresh groundwaters for protection of the best uses assigned to each class. See TOGS 1.1.1 (NYSDEC, 1998).

<sup>2</sup> HPC, 2000. Phase II Environmental Site Assessment – Isola Laminate Systems, Inc., Hoosick Falls, New York. Harress Pickel Consulting. ENSR, 2001. Phase II Subsurface Investigation - Isola Laminate Systems, Inc., Hoosick Falls, New York. ENSR International. AECOM, 2013. Subsurface Investigation Report – Oak Mitsui, 1 Mechanic Street, Hoosick Falls, New York. AECOM Environment.

equipment and tools were cleaned with an Alconox® and potable water solution followed by PFAS-free bottled water or distilled water rinse between uses. Decontamination water from the pad was transferred into pre-labeled 55-gallon steel drums.

### 3.5 Surface and Near-Surface Soil Sampling

Surface soil samples were collected at all locations using a stainless steel hand auger or shovel at a depth of 0 to 2 inches below the surficial vegetative cover, but included the root mass. Near-surface soil samples were collected using a stainless steel hand auger from the depth interval of 2 to 12 inches below the surficial vegetative cover. The hand auger and shovel were decontaminated between sample locations as described in Section 3.4.

At locations MS-B/MW-008, -009, -014, -015, -017 and -018, the depth intervals of the surface and near-surface soil samples were adjusted due to the ground surface being comprised of asphalt and/or concrete. Those surface and near surface samples were collected from the same depth intervals directly beneath the asphalt and/or concrete ground cover.

### 3.6 Soil Borings and Subsurface Soil Sampling

Subsurface soil samples were collected at the soil boring locations shown on Figure 4 and described in Table 2. All soil borings were advanced to the top of bedrock except at MS-B/MW-014 and MS-B-016.

The soil boring at MS-B/MW-014 was terminated at a depth of 40 feet below ground surface as precautionary measure due the soil core having the appearance of a light-colored non-aqueous phase liquid and concern not to drag any potential contamination downward. Cancellation of the continuance of this soil boring was approved in the field by NYSDEC.

The soil boring at MS-B-016 was not advanced because a buried concrete slab was encountered at approximately five feet below ground surface (bgs) at multiple locations during the subsurface clearance activities. Cancellation of this soil boring/groundwater monitoring well location was approved in the field by NYSDEC.

Each borehole was sampled continuously using core-barrel drilling rods for geologic characterization. Discrete interval samples were collected for laboratory analysis. Reusable sampling equipment was decontaminated between sample locations as described in Section 3.4.

Soil samples were placed directly into sealable high-density polyethylene (HDPE) bags, which were labeled with the depth interval. The soil was allowed to equilibrate within the bag for approximately five minutes prior to the collection of headspace readings. Soil was screened by using a calibrated photoionization detector (PID) equipped with an 11.7 electron volt (eV) lamp. Soil samples were examined for physical properties including color, texture, composition, moisture content, odor, and evidence of staining, discoloration, or product/sheen. Soil descriptions and other field data and observations were documented on soil boring logs.

Soil samples selected for laboratory analysis were biased towards stratigraphic unit changes or the two-foot interval of highest suspected contamination based on the results of PID screening, visual examination, olfactory evidence, and consultation with NYSDEC's field representative. Soil samples were collected at the fill/native soil interface and at major stratigraphic changes from the top of the basal layer down to a depth that provides an appropriate sample volume required to complete the analysis. For any mottled zone, the sample depth interval encompassed the total thickness of the observed mottling.

In the absence of apparent contamination or stratigraphic changes, one soil sample was collected from the two-foot depth interval above the water table. Additional soil samples for laboratory analysis were collected based on:

- Field screening results;

- Visual examination for discoloration, mottling, or other observations suggestive of possible organic-rich zones; and
- Consultation with NYSDEC's field representative.

Samples were collected directly into laboratory-provided sampling containers, which were pre-labeled and stored in a clean pre-chilled cooler. Samples were stored on ice and transported under chain of custody to the analytical laboratory.

### 3.7 Soil Sampling for Additional Delineation

Initial surface and near surface soil sampling in the wooded northern area of the Site indicated metals and SVOC impacts (polycyclic aromatic hydrocarbons [PAHs]) at concentrations exceeding the NYS Part 375 SCOs for restricted commercial and industrial use and protection of groundwater. Additional soil sampling was conducted to determine if the metals and SVOC impacts were limited in horizontal and vertical extent.

Samples were collected at 27 soil locations arranged in a triangular grid with common vertices (where possible) at distances of approximately 40 feet from the original sampling locations. Samples were collected from two depth intervals, shallow (0"-12") and deeper (e.g., 24"-36"), at each location.

Shallow soil samples were collected using a stainless steel hand auger at a depth of 0"-12" below the surficial vegetative cover, but included the root mass. The hand auger was decontaminated between sample locations as described in Section 3.4. Deeper soil samples were collected using a direct-push drilling rig.

Soil samples were placed in HDPE bags, labeled, and field-screened via PID as described in Section 3.6. Samples were collected directly into laboratory-provided sampling containers, which were pre-labeled and stored in a clean pre-chilled cooler. Samples were stored on ice and transported under chain of custody to the analytical laboratory.

### 3.8 Groundwater Monitoring Well Installations

Nine (9) new monitoring wells were installed at selected depth intervals based on conditions observed during the subsurface soil sampling (Table 4). Existing and newly installed monitoring well locations are shown on Figure 4.

Monitoring well installations were initiated following the completion of each soil boring where the soil boring profile indicated that a groundwater-bearing strata was present. Monitoring well screen interval settings were determined after review of each soil boring's respective stratigraphic profile and generally installed at the first groundwater encountered.

Overburden monitoring wells were installed via rotosonic drilling methods. The wells were constructed using two-inch schedule 40 polyvinyl chloride (PVC) pipe with either five-foot or ten-foot long, 0.010-inch pre-slotted screens, with the exception of MS-MW-011, which has a three-foot screen due to encountering bedrock at 6.5 feet bgs. If the depth of the soil boring exceeded the depth of the monitoring well screen interval, the boring was backfilled with a bentonite seal that was hydrated using approved potable water. The bentonite seal was brought up to approximately two feet below the screen zone, filter pack sand was then placed between the bentonite seal and the bottom of the well screen. Sand filter packs were placed around each well screen using Morie #1 or equivalent sand to a minimum of two-feet above the top of the well screen. A minimum two-foot thick bentonite seal was installed and hydrated above the filter pack using approved potable water. Cement-bentonite grout was tremie-grouted with a Portland cement/high-grade bentonite mixture to backfill the remainder of the borehole to approximately one-foot below ground surface. The cement-bentonite grout was mixed using approved potable water. A flush-mounted steel protective casing was cemented in place over each monitoring well.

Each new monitoring well was developed to facilitate collection of representative groundwater samples. Monitoring wells were developed using inertial pumping techniques with a stainless steel check-valve and HDPE tubing and/or a dual gas-lift using nitrogen. Water levels and field parameters including temperature, SpC, DO, pH, turbidity, and ORP were measured and recorded during well development activities using a water level indicator and a calibrated multi-parameter meter with a flow cell. Development water was purged into polyethylene totes and transferred to an on-Site frac tank for temporary storage prior to off-Site disposal (Section 4.5).

New and existing groundwater monitoring well locations were surveyed initially using Trimble Global Positioning System (GPS) equipment and then by Control Points Associates Inc., a New York-licensed surveyor.

### 3.9 Groundwater Sampling

After a three-week equilibration period, groundwater sampling of the monitoring wells was performed using USEPA low-flow well purging/sample collection techniques (USEPA, 1996).

Prior to sampling, each well was inspected (including the well's protective cover and casing) to confirm suitability for collection of representative groundwater samples. The inspection results, including notations for any needed repairs, were recorded on low-flow sampling forms.

Groundwater levels were measured and recorded from the top of each well casing prior to purging. The total depth of each monitoring well was measured and recorded following sampling to minimize bottom disturbance in the well.

Geochemical parameters including temperature ( $^{\circ}\text{C}$ ), specific conductance ( $\mu\text{S}/\text{cm}$ ), dissolved oxygen (DO), pH, turbidity (in NTU), and oxidation-reduction potential (ORP) were monitored and recorded to provide geochemical data and evaluate groundwater stabilization criteria prior to sample collection. Stabilization is defined as when the turbidity remains  $< 50$  NTUs for three consecutive readings, and the parameters listed below deviate by less than the specified criteria for three consecutive readings:

- $\text{DO} \leq 10\%$
- Turbidity  $< 50$  NTUs;
- $\text{SpC} \leq 3\%$ ;
- Temperature ( $^{\circ}\text{C}$ )  $\leq 3\%$ ;
- $\text{pH} \pm 0.1$  unit; and
- $\text{ORP} \pm 10$  millivolts (mV).

Once stabilization criteria were achieved, samples were collected directly into laboratory-supplied sampling containers, which were stored in a clean, pre-chilled cooler. If stabilization criteria could not be achieved, the sample was collected at the discretion of the ERM geologist in consultation with NYSDEC's field representative. Samples were stored on ice and transported under strict chain-of-custody procedures to the analytical laboratory.

### 3.10 Sample Analyses

Table 3 presents a summary of all SC soil and groundwater samples and their associated analyses.

All initial overburden soil and groundwater samples were analyzed for PFAS, TCL VOCs, TCL SVOCs, pesticides, 1,4-dioxane, PCBs, TAL metals, cyanide, TOC, and pH.

Follow-up soil delineation samples, as discussed in Section 3.7, were selectively analyzed for metals, SVOCs and PFAS depending on location:

- Metals only at ten locations: adjacent to MS-SS-001, -002, -003, -009; and four locations at MS-B-015 that included: three delineation borings located in a triangular arrangement at a

distance of approximately 25 feet from the original sampling location plus one boring adjacent to the original sample location;

- SVOCs only at eight locations: adjacent to MS-SS-007, -008 & -010;
- Metals and SVOCs at ten locations: adjacent to MS-SS-004, -005, -006, -008, -009; and four locations at MS-MW-019: 3 locations in a triangular arrangement at a distance of approximately 25 feet from the original sampling location plus one boring adjacent to the original sample location; and
- PFAS were included as analytes at four locations (MS-DB-002, -004, -009, & MS-B-019 in addition to metals and/or SVOC parameters.

All samples were analyzed by Eurofins TestAmerica LLC (Eurofins). Eurofins is an Environmental Laboratory Approval Program (ELAP) approved laboratory for all parameters except PFAS, for which regulatory approval has not yet been established by USEPA or NYSDEC.

Analytical methods for soil and groundwater sample analyses are as follow:

- PFAS by USEPA Method 537-1.1 (modified);
- TCL VOCs plus 10 tentatively identified compounds (TICs) by USEPA Method 8260;
- TCL SVOCs plus 20 TICs by USEPA Method 8270C;
- 1,4-dioxane by USEPA Method 8270C with selected ion monitoring (SIM);
- Pesticides by USEPA Method 8081;
- PCBs by USEPA Method 8082;
- TAL metals by USEPA Method 6010B
- Cyanide by USEPA Method 9012B; and
- Mercury by USEPA Method 7471A;
- TOC by Lloyd Kahn method; and
- pH by Standard Method 9045D.

The 21 PFAS include:

<b>Group</b>	<b>Substance</b>	<b>CAS Number</b>	<b>Acronym</b>
Perfluoroalkyl Sulfonic acid	Perfluorobutane sulfonic Acid	375-73-5	PFBS
	Perfluorohexane sulfonic Acid	355-46-4	PFHxS
	Perfluoroheptane sulfonic Acid	375-92-8	PFHpS
	Perfluorooctane sulfonic Acid	1763-23-1	PFOS
	Perfluorodecane sulfonic Acid	335-77-3	PFDS
Perfluoroalkyl Carboxylic Acids	Perfluorobutanoic Acid	375-22-4	PFBA
	Perfluoropentanoic Acid	2706-90-3	PFPeA
	Perfluorohexanoic Acid	307-24-4	PFHxA
	Perfluoroheptanoic Acid	375-85-9	PFHpA
	Perfluorooctanoic Acid	335-67-1	PFOA
	Perfluorononanoic Acid	375-95-1	PFNA
	Perfluorodecanoic Acid	335-76-2	PFDA
	Perfluoroundecanoic Acid	2058-94-8	PFUnA
	Perfluorododecanoic Acid	307-55-1	PFDoA
	Perfluorotridecanoic Acid	72629-94-8	PFTriA
Perfluorotetradecanoic Acid	376-06-7	PFTeA	
Fluorotelomer Sulfonates	6:2 Fluorotelomer sulfonic Acid	27619-97-2	6:2FTS
	8:2 Fluorotelomer sulfonic Acid	39108-34-4	8:2 FTS



<i>Group</i>	<i>Substance</i>	<i>CAS Number</i>	<i>Acronym</i>
Perfluorooctane-Sulfonamides	Perfluorooctanesulfonamide	754-91-6	FOSA
Perfluorooctane-Sulfonamidoacetic acids	N-methyl perfluoro-1-octanesulfonamidoacetic acid	2355-31-9	N-MeFOSAA
	N-ethyl perfluoro-1-octanesulfonamidoacetic acid	2991-50-6	N-EtFSOSAA

The laboratory analytical reports are formatted as NYSDEC Analytical Services Protocol (ASP) Category B deliverables to facilitate data validation or usability evaluation. Electronic data deliverables (EDDs) were also provided by the project laboratory.

### 3.11 Potential Underground Storage Tank Location

During SC oversight activities, NYSDEC noted that a capped pipe was observed protruding from the ground on the east side of the southernmost building at the top of the Hoosic River bank (see Figure 4 - standpipe). Since that time, the property owner had cleared away all surrounding brush and cut away the near surface soil layer as part of ongoing redevelopment activities.

ERM removed the cap on the pipe to investigate and obtain a depth measurement but found the pipe to be obstructed or terminated at approximately 4 feet from the top of the pipe. NYSDEC expressed concern that a UST might be present below the protruding pipes, possibly one of the known USTs that were closed in-place with NYSDEC approval in 1998, and that soil borings should be completed to determine if a leak had previously occurred and soil samples should be collected if product is encountered or upon any indication of a release.

Note that only two of the three previously abandoned in-place USTs were identified during the previous geophysical surveys for drilling subsurface clearance near the southeast corner of the building, to the south of the UST area. The third UST was not located because it was likely located to the north of the other two tanks and outside of the survey area for drilling subsurface clearance.

On 17 June 2019, Honeywell proposed geophysical surveys to confirm the locations of all three USTs and determine if another UST was present in the nearby standpipe location using ground penetrating radar and electromagnetic methods. In the event that a UST was identified, Honeywell would consider test pits and/or soil borings/sampling to determine if the tank was closed appropriately and if any indications of leakage are present within the vicinity of the tank. Locations for test pits/boring and sampling intervals would be determined in the field in consultation with NYSDEC representatives.

As further discussed in Section 4.3, the locations of all three previously abandoned in-place USTs were identified side by side adjacent to the southeast corner of the building. No indications of a UST were identified in the area of the standpipe.

### 3.12 Investigative Derived Wastes

Investigation-derived waste (IDW) consisted of the following:

- Water: decontamination fluids, monitoring well development water, surface water and groundwater from monitoring well development and sampling;
- Disposables: personal protective equipment, HDPE tubing used for groundwater sampling, paper towels and HDPE plastic; and
- Solids: soil cuttings, sediment and drilling mud.

The IDW generated from the field sampling efforts was placed in DOT-approved 55-gallon steel drums or an on-Site frac tank, and staged in appropriate containers for subsequent waste characterization sampling and analysis, waste determination and disposal.

All containers of IDW were labeled with generator name, address, contents, container number, waste determination status and accumulation start date. The IDW containers were staged in on-site designated, secure temporary staging areas located at the Mechanic Street property.

### 3.13 Community Air Monitoring Plan

The NYSDEC-approved Work Plans included a Community Air Monitoring Plan (CAMP), which was implemented throughout ground intrusive site characterization activities at the Site. The CAMPs included monitoring of both fugitive dust and organic vapors. Two CAMP monitoring stations with enclosures were set up daily: one upwind of the work area; and one downwind of the work area. The system was programmed to notify field personnel via text messaging in the instance of an exceedance of established action levels, so that corrective action could be implemented. Additionally, one handheld PID was utilized within the exclusion zone to facilitate field screening of soil samples and monitor breathing zone vapor concentrations.

### 3.14 Deviations from the Work Plan

- The soil boring adjacent to existing monitoring well MW-8 was originally planned for stratigraphic profiling only and not to install a groundwater monitoring well. However, a deeper sand and gravel unit was encountered in the soil boring profile and a well (MS-B/W-008B) was installed to allow for collection of groundwater samples from that deeper geologic unit at the location of MS-MW-8.
- The soil boring at MS-B/MW-014 was terminated at a depth of 40 feet below ground surface as precautionary measure due the soil core having the appearance of a light-colored non-aqueous phase liquid and concern not to drag any potential contamination downward. NYSDEC approved termination of the boring at in the field.
- The soil boring at MS-B-016 was not advanced because a buried concrete slab was encountered at approximately five feet bgs at multiple locations during the subsurface clearance activities. Cancellation of this soil boring/groundwater monitoring well location was approved in the field by NYSDEC.
- A groundwater monitoring well was not installed at the location MS-B-017 because the soil boring profile did not indicate the presence of groundwater-bearing strata suitable for constructing a well.
- Groundwater samples were not collected from monitoring wells MS-MW-12 and -13 because insufficient water was present in those wells at the time of sampling.

## 4. SITE CHARACTERIZATION RESULTS

Well construction and survey details are listed in Table 4. Field documentation for the UST geophysical survey, soil borings, well construction and groundwater sampling is presented in the following appendices:

- Appendix A SC Geophysical Report
- Appendix B Soil Boring and Well Construction Logs
- Appendix C SC Groundwater Sampling Records

### 4.1 Geology and Hydrogeology

Figure 3 presents a typical stratigraphic section that summarizes geological materials encountered during the SC. Overburden units at the Mechanic Street property typically consist of an upper sandy gravel fill unit with slag/brick/metal debris present, and lesser amounts of silt and clay. The upper fill layer is underlain by a silt and clay unit that is laterally continuous across the area. The silt and clay units are typically underlain by a lower sand and gravel unit with interbedded sandy silt beds. Gravel and cobbles are more predominant near the top of bedrock.

Bedrock is dark gray foliated phyllite, which is weathered near the boundary between the overburden and competent rock.

The historical and SC boring logs and soil boring logs and ArcGIS interpolation methods were used to prepare overburden thickness and bedrock surface elevation contour maps presented in Figures 5 and 6, respectively. Figures 5 and 6 also show the traces of two geologic cross sections A-A' and B-B' presented in Figures 7 and 8, respectively. Section A-A' trends from south to northwest wrapping around the east side of the Site along the west bank of the Hoosic River. Section B-B' trends generally west to east and perpendicular to Section A-A' sharing a common point at soil boring MS-B/MW-15.

The cross-sections show the distribution and geometry of the overburden deposits and bedrock surface shown on Figure 5 that illustrates the interpreted overburden thickness based on the soil borings. Both cross sections show a pronounced thickening of overburden towards the east northeast, as well as the irregular surface at top of bedrock. The interpreted thickness of overburden deposits is based on the soil boring logs. Overburden in the vicinity of the Mechanic Street property is variable, increasing from southwest to northeast, and ranging from less than 5 to approximately 110 feet.

These data suggest the bedrock surface slopes towards the northeast.

The depth to groundwater was variable across the Site. Groundwater was not encountered at soil boring MS-B-17 but is generally encountered in the overburden at the Mechanic Street property at approximately 10 to 15 feet bgs. Groundwater elevations from shallow overburden monitoring wells ("A" Wells) and mapped groundwater contours are shown in Figure 9. Review of these data indicate that groundwater flow in the shallow sandy overburden unit is towards the southeast (i.e. towards the Hoosic River). Comparison with Figure 2 suggests overburden groundwater flow is controlled primarily by local topography.

### 4.2 Sample Results

All soil and groundwater monitoring well samples are summarized in Table 3 along with their associated analyses.

The analytical results from the samples are presented in the following sections and summarized in Tables 5 through 8, and illustrated in Figures 10 through 19. Soil sample results for TAL/TCL constituents are compared to their respective Part 375 SCOs for commercial and industrial use and protection of groundwater. Groundwater sample results for TAL/TCL constituents are

compared to their respective NYS Class GA groundwater quality standards and guidance values.

## 4.2.1 PFOA and Other PFAS

### 4.2.1.1 PFOA and other PFAS in Soil

The analytical results for PFOA and other PFAS from 82 soil samples plus five field duplicate samples are presented in Table 5. Concentrations of PFOA and associated soil sample intervals are shown on the map in Figure 10.

The predominant PFAS was PFOA by occurrence and concentrations in soil.

PFOA concentrations in soil samples ranged from below the detection limit to 20 µg/kg (MS-B-019D: 24"-36"), with a median concentration of 1.3 µg/kg. PFOA concentrations in 20% of the samples were below the detection limit and below 5 µg/kg in 78 of the 82 soil samples (95%).

PFOS was also detected in soil samples but at concentrations that ranged from below the detection limit to 3.4 µg/kg (MS-B-011: 0"-2").

Other PFAS were detected in soil samples but at concentrations generally less than 1 µg/kg.

### 4.2.1.2 PFOA and other PFAS in Groundwater

The analytical results for PFOA and other PFAS from 12 groundwater monitoring well samples plus two field duplicate samples are presented in Table 6. Concentrations of PFOA and other PFAS are shown on the map in Figure 11.

The predominant PFAS was PFOA by occurrence and concentrations in groundwater.

PFOA concentrations in on-site groundwater ranged from below the detection limit to 2,200 ng/L (MW-MW-8). The PFOA concentration in this well during the 2016 sampling event was 2,300 ng/L. The median PFOA concentration in groundwater was 770 ng/L.

PFOS was detected in eight out of twelve groundwater samples. Concentrations of PFOS ranged from below the detection limit to a maximum concentration of 8.7 J ng/L. Other PFAS concentrations ranged from below the detection limits to a maximum concentration of 81 ng/L (PFHpA).

## 4.2.2 Volatile Organic Compounds (VOCs)

No VOCs were detected in groundwater at concentrations above their respective NYS Class GA groundwater quality standard or guidance values. No VOCs were detected in soil above their respective Part 375 SCOs for commercial use.

### 4.2.2.1 VOCs in Soil

The analytical results for VOCs from 73 soil samples plus four field duplicate samples are presented in Table 7. Total detected VOC concentrations and associated soil sample intervals are shown on the map in Figure 12.

VOCs were not detected in soil at concentrations above Part 375 SCO for commercial use. 1,2,4-Trimethylbenzene and acetone were the only VOCs detected in soil at concentrations exceeding their respective Part 375 SCOs for protection of groundwater.

1,2,4-Trimethylbenzene was detected in the soil sample and its duplicate collected at MS-B-010 (4'-5') at concentrations exceeding the Part 375 SCO for protection of groundwater.

Acetone was detected at concentrations exceeding the Part 375 SCO for protection of groundwater from MS-B-13(8'-9'), -15(34'-36'), -16(0.1'-1'), -17(5'-6' & 33'-34'), -18(24'-25' & 40'-42') and MS-SS-01(0.1'-1'), -005(0.1'-1'), -009(0'-0.1' & 0.1'-1').

#### 4.2.2.2 VOCs in Groundwater

The analytical results for VOCs from 11 groundwater monitoring well samples plus a field duplicate sample are presented in Table 8. Total detected VOC concentrations are shown on the map in Figure 13.

Acetone and carbon disulfide were the only VOCs detected in the groundwater samples and concentrations were well below their respective NYS Class GA groundwater quality guidance values.

#### 4.2.3 Semi-volatile Organic Compounds (SVOCs)

No SVOCs were detected in groundwater at concentrations above their respective NYS Class GA groundwater quality standard or guidance values. Several SVOCs (primarily PAHs) were detected in soil above their respective Part 375 SCOs for commercial use on the northern wooded portion of the Site.

##### 4.2.3.1 SVOCs in Soil

The analytical results for SVOCs from 109 soil samples plus six field duplicate samples collected from on-site locations are presented in Table 7.

SVOCs (primarily PAHs) were detected in shallow soils on the northern wooded portion of the Site at concentrations exceeding one or more of their respective Part 375 SCOs for commercial use, or protection of groundwater.

Figure 14 shows the sampling locations where one or more SVOC were detected at a concentration exceeding one or more of their respective Part 375 SCOs for commercial use. The specific SVOCs, associated soil sample intervals, and detected concentrations are also posted on Figure 14.

Most of the exceedances were in soils less than 10 feet bgs except at the location of MS-B/MW-014 where benzo(a)anthracene and chrysene were detected in the soil samples collected from the 31'-32' and 36'-38' intervals at concentrations exceeding their respective Part 375 SCOs for protection of groundwater, but not for commercial use.

##### 4.2.3.2 SVOCs in Groundwater

The analytical results for SVOCs from 12 groundwater monitoring well samples plus a field duplicate sample are presented in Table 8.

1,4-dioxane by Method 8270-SIM was not detected in any groundwater sample.

SVOCs were only detected in one groundwater sample but at concentrations well below their respective NYS Class GA groundwater quality standard or guidance values. Diethyl phthalate and di-n-butyl phthalate were detected in the sample collected from monitoring well MS-MW-010 at concentrations of 0.69 µg/L and 0.33 µg/L, respectively.

The map presented in Figure 15 illustrates the lack of SVOC exceedances of any NYS Class GA groundwater quality standard or guidance values.

#### 4.2.4 Metals

Iron, manganese, magnesium, and sodium, which are considered to be naturally occurring from glacial deposits, were detected in the majority of wells at concentrations above their respective NYS Class GA groundwater quality values. Several other metals were detected in groundwater at one location at concentrations that exceeded their respective NYS Class GA groundwater quality values. Several metals were detected primarily in shallow soils on the northern wooded portion of the Site at concentrations exceeding their respective Part 375 SCOs for commercial use.

#### 4.2.4.1 *Metals in Soil*

The analytical results for metals from 110 soil samples plus seven field duplicate samples collected from on-site locations are presented in Table 7.

Metals that were detected at concentrations exceeding one or more of their respective Part 375 SCOs for commercial use or protection of groundwater include arsenic, barium, cadmium, chromium, copper, lead, mercury, silver, and zinc. These occurrences were primarily in shallow soils on the northern wooded portion of the Site.

Figure 16 shows the sampling locations where one or more metals were detected at a concentration exceeding one or more of their respective Part 375 SCOs for commercial use. The specific metals, associated soil sample intervals, and detected concentrations are also posted on Figure 16.

#### 4.2.4.2 *Metals in Groundwater*

The analytical results for metals from 11 groundwater monitoring well samples plus a field duplicate are presented in Table 8. Metals concentrations are shown on the map in Figure 17.

The sample from MS-MW-019 located on the northern wooded portion of the Site contained metals detected at concentrations exceeding one or more of their respective NYS Class GA groundwater quality standard or guidance values including arsenic, barium, beryllium, cadmium, chromium, copper, iron, lead, magnesium, manganese, mercury, nickel, sodium, and zinc. Most of these metals are naturally occurring in glacial deposits in the northeastern United States.

The exceedances of metals in the groundwater samples from remaining nine other monitoring wells were limited to iron, manganese, magnesium, and sodium, which are considered to be naturally occurring from glacial deposits.

Figure 17 shows the sampling locations where one or more metals were detected at a concentration exceeding NYS Class GA groundwater quality standard or guidance values. The specific metals and detected concentrations are also posted on Figure 17.

### 4.2.5 *Total Cyanide*

#### 4.2.5.1 *Total Cyanide in Soil*

Total cyanide was not detected in any soil sample at a concentration above any Part 375 SCO.

#### 4.2.5.2 *Total Cyanide in Groundwater*

Total cyanide was not detected in any groundwater sample at a concentration exceeding its NYS Class GA groundwater quality standard.

### 4.2.6 *Pesticides*

#### 4.2.6.1 *Pesticides in Soil*

The analytical results for pesticides from 72 soil samples plus four field duplicate samples collected from on-site locations are presented in Table 7. The analytical results for the near-surface soil sample (0.1'-1') collected at MS-B-013 were rejected during the data validation process.

Although pesticides were detected in some samples, all concentrations were below their respective Part 375 SCOs for commercial use as illustrated on the map presented in Figure 18.

Two pesticides, heptachlor and alpha-hexachlorocyclohexane, were detected in a near-surface soil sample at one location (MS-B-015) at concentrations exceeding their respective Part 375 SCOs for protection of groundwater.

#### 4.2.6.2 Pesticides in Groundwater

Pesticides were not detected in any groundwater samples. The map presented in Figure 19 illustrates the lack of pesticide detections or exceedances of any NYS Class GA groundwater quality standard or guidance values.

#### 4.2.7 Polychlorinated Biphenyls (PCBs)

##### 4.2.7.1 PCBs in Soil

PCBs were not detected in any soil samples.

##### 4.2.7.2 PCBs in Groundwater

PCBs were not detected in any groundwater samples.

#### 4.2.8 Total Organic Carbon (TOC) and pH

##### 4.2.8.1 TOC and pH in Soil

The analytical results for TOC and pH from 75 soil samples plus field duplicate samples collected from on-site locations are presented in Table 5.

The pH values for soil ranged from slightly acidic to slightly alkaline from 5.8 to 8.6.

TOC concentrations in soil ranged from 3,020 to 471,000 mg/kg in surface to near surface soil samples and from below the detection limit to 92,500 mg/kg in subsurface soil samples.

##### 4.2.8.2 TOC and pH in Groundwater

The analytical results for TOC and pH from groundwater monitoring well samples collected on-site are presented in Table 6.

The pH values for groundwater monitoring well samples were generally neutral to slightly alkaline and ranged from 7.1 to 8.31. These values are within the NYS Class GA groundwater quality standard range of 6.5 to 8.5.

TOC concentrations ranged from below the detection limit to 19.1 mg/L.

#### 4.3 Potential Underground Storage Tank Location

New York Leak Detection (NYLD) performed the geophysical surveys on 16 July 2019. The locations of all three previously abandoned in-place USTs were identified side by side adjacent to the southeast corner of the building. No indications of a UST were identified in the area of the standpipe. The standpipe was investigated further; the obstruction was a 90-degree elbow on the pipe pointing toward the building; and the pipe was traced to the building and found to have been part of a former propane gas system for the building.

#### 4.4 Assessment of Data Quality

##### 4.4.1 Data Quality Objectives

Data Quality Objectives (DQOs) are qualitative and quantitative criteria used to support the decision making process. DQOs define the uncertainty in analytical data and consider precision, accuracy, representativeness, completeness, and comparability (PARCC):

- Precision is a measure of mutual agreement among measurements of the same property usually under prescribed similar conditions. Precision is best expressed in terms of the standard deviation.

- Accuracy is the degree of agreement of a measurement (or an average of measurements) with an accepted reference of “true value”. Accuracy is an estimate of potential numerical bias (i.e., low or high) in analytical data.
- Representativeness expresses the degree to which data parameter variations at a sampling point indicate a process condition, or an environmental condition.
- Completeness is a measure of the amount of valid data obtained compared to the amount that was expected to be obtained under correct normal conditions.
- Comparability expresses the confidence with which one data set can be compared with another. Comparability is a qualitative measurement. Comparability is assessed by reviewing results or procedures for analytical data that do not agree with expected results.

All samples were analyzed by Eurofins Lancaster Laboratories Environmental. A NYSDEC ASP Category B deliverable was provided for all data. Table 3 presents each sample and the analytical tests performed. Samples were analyzed for one or more of the following tests. More detailed information about each test is provided in Table 9.

The Quality Assurance Officer carried out a preliminary review of the data packages. The data were validated by an independent third party, Environmental Data Services, Inc. (EDS), located at 177 Herman Melville Avenue, Newport News, Virginia. The review of the sampling data by EDS was performed in accordance with the:

- Analytical methods;
- NYSDEC ASP (NYSDEC, 2010a);
- USEPA CLP National Functional Guidelines for Organic Superfund Data Review (USEPA, 2017a);
- USEPA CLP National Functional Guidelines for Inorganic Superfund Data Review (USEPA, 2017b);
- Applicable USEPA Region II Data Review Standard Operating Procedures; and
- Reviewer’s professional judgment.

The order in which the aforementioned guidance documents and/or criteria were listed as being used for validation does not imply a hierarchy of reliance. The most comprehensive reference sources were used to perform a complete data validation.

#### **4.4.2 Data Usability**

Data validation reports (DVRs) were prepared for all samples based upon the data review. The DVRs consist of a section that contains an assessment of the deliverables, followed by a section that describes the analytical results and any qualifications that should be considered when using the data. The DVRs highlight the data results that did not meet QC limits and therefore required data qualification. These tables include information such as, blank contamination, surrogate recoveries, and internal standard area counts that did not meet QC criteria.

Qualification of data, where appropriate, was made by the use of qualifier codes based upon the data validation process. These qualifiers are defined in the data tables where used and serve as an indication of the qualitative and quantitative reliability of the data.

The final review of the all DVRs was performed by the ERM Quality Assurance Officer. The validation indicated that all data are valid and usable for the purposes of the SC with the few exceptions described in the DVRs.



## 4.5 Investigation Derived Wastes

All IDW was removed from the Site and shipped under an approved waste profile to a disposal or recycling facility as approved by the NYSDEC. A summary of all IDW accumulated during the site investigation is presented in Table 10.

## 5. CONCLUSIONS AND RECOMMENDATIONS

Based upon the soil and groundwater findings of the SC presented above, the Site has been adequately characterized and TAL/TCL constituents and PFAS do not indicate consequential disposal of hazardous waste. Specifically:

Regarding PFOA in soil and groundwater at the Site:

- The median concentration of PFOA in soil was 1.3 µg/kg. PFOA concentrations in soil were below the detection limit in 20% of the soil samples and below 5 µg/kg in 95% of the soil samples.
- Groundwater on Site and in the vicinity is not used for drinking water.
- The median concentration of PFOA in groundwater was 770 ng/L.
- Based on the results of the site characterization program, soil and groundwater do not appear to be a source of PFAS to the environment.

Regarding other TAL/TCL constituents in soil and groundwater:

- Exceedances of SCGs observed in the currently developed southern portion of the Site were limited to
  - Relatively low levels VOCs in soil (acetone in soil at some locations & 1,2,4-Trimethylbenzene in soil at one location on the west side of the Site),
  - Metals in shallow soil at one location along the east side of the Site, and arsenic in one deep soil sample on the south side of the Site; and
  - Metals (iron, manganese, magnesium, and sodium) in groundwater, which are considered to be naturally occurring from glacial deposits.
- No VOCs were detected in groundwater above their respective NYS Class GA groundwater quality standard or guidance values. Acetone and carbon disulfide were the only detected VOCs and their concentrations were well below their respective NYS Class GA groundwater quality guidance values.
- No SVOCs were detected in groundwater above their respective NYS Class GA groundwater quality standard or guidance values.
- SVOCs (PAHs) and metals impacts to shallow soils/fill are consistent with the long historical industrial use and large building fires.
- Groundwater is not significantly impacted by TAL/TCL compounds and suggests that significant leaching from soil is not occurring.

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- USEPA, 2016b. Hoosick Falls Update: EPA Results Show Ballfields & Athletic Field OK to Use. Community Update No. 3. April. United States Environmental Protection Agency [https://www.epa.gov/sites/production/files/2016-04/documents/hoosick\\_falls\\_fact\\_sheet\\_no\\_3.pdf](https://www.epa.gov/sites/production/files/2016-04/documents/hoosick_falls_fact_sheet_no_3.pdf)
- USEPA, 2016c. Hoosick Falls Update: Results from 34 Locations Show No Soil Cleanup Needed at Residential Properties, Football & Recreational Fields. Community Update No. 5, September. United States Environmental Protection Agency. [https://www.epa.gov/sites/production/files/2016-09/documents/hoosickfalls\\_factsheetno5\\_nearmccaffreystresults\\_final\\_v2\\_0.pdf](https://www.epa.gov/sites/production/files/2016-09/documents/hoosickfalls_factsheetno5_nearmccaffreystresults_final_v2_0.pdf)
- USEPA, 2017a. National Functional Guidelines for Organic Superfund Methods Data Review. United States Environmental Protection Agency Office of Superfund Remediation and Technology Innovation, January 2017.
- USEPA, 2017b. National Functional Guidelines for Inorganic Superfund Methods Data Review. United States Environmental Protection Agency Office of Superfund Remediation and Technology Innovation, January 2017.
- NYSDEC. 2006. Soil Cleanup Objectives (SCOs) Title 6 Official Compilation of New York Codes, Rules and Regulations (6 NYCRR) Subpart 375-6.8.
- NYSDEC, 2010. DER-10: Technical Guidance for Site Investigation and Remediation. NYSDEC Division of Environmental Remediation, Albany, May 2010.

## **FIGURES**

- 1 Property Location**
- 2 Site Layout**
- 3 Typical Stratigraphic Section**
- 4 Site Characterization Sample Locations**
- 5 Interpolated Overburden Thickness and Cross-Section Locations**
- 6 Interpolated Bedrock Surface and Cross-Section Locations**
- 7 Geological Cross Section A-A'**
- 8 Geological Cross Section B-B'**
- 9 Interpolated Potentiometric Contours**
- 10 PFOA Results in Soil**
- 11 PFOA Results in Groundwater**
- 12 VOC Results in Soil**
- 13 VOC Results in Groundwater**
- 14 SVOC Results in Soil**
- 15 SVOC Results in Groundwater**
- 16 Metals Results in Soil**
- 17 Metals Results in Groundwater**
- 18 Pesticide Results in Soil**
- 19 Pesticides Results in Groundwater**



Legend

-  Approximate Property Boundary
-  Village of Hoosick Falls Boundary

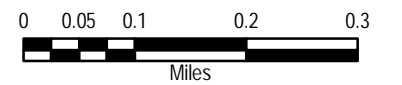
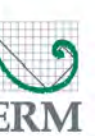
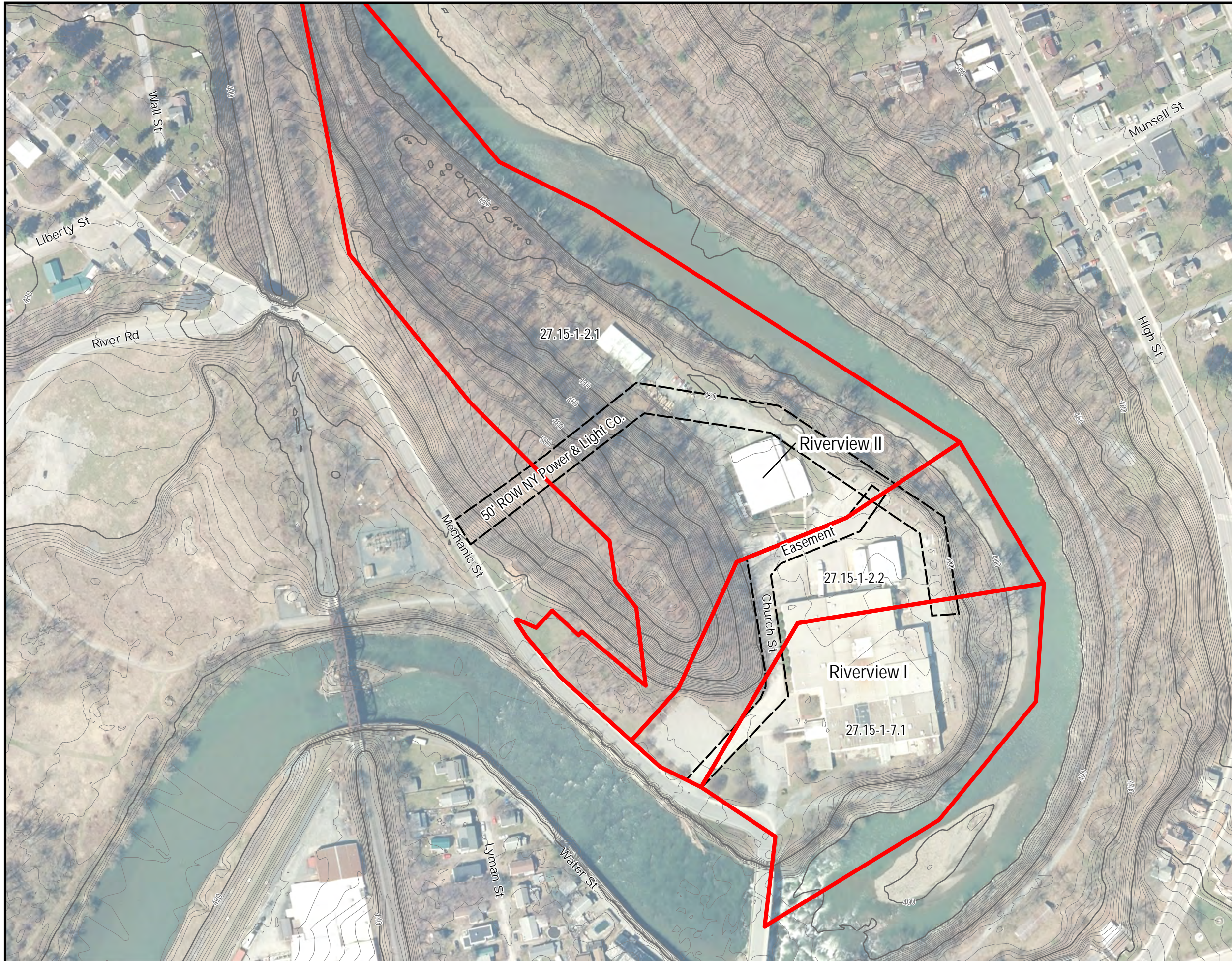






Figure 1: Property Location  
 AlliedSignal Laminate Systems  
 Mechanic St. 442050  
 Village of Hoosick Falls  
 New York



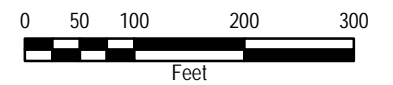


**Legend**

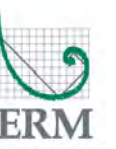
-  Site-Specific ROW and Easement Area
-  Elevation Contours - 20 ft. amsl
-  Elevation Contours - 2 ft. amsl
-  Approximate Tax Parcel Boundaries

**NOTES:**

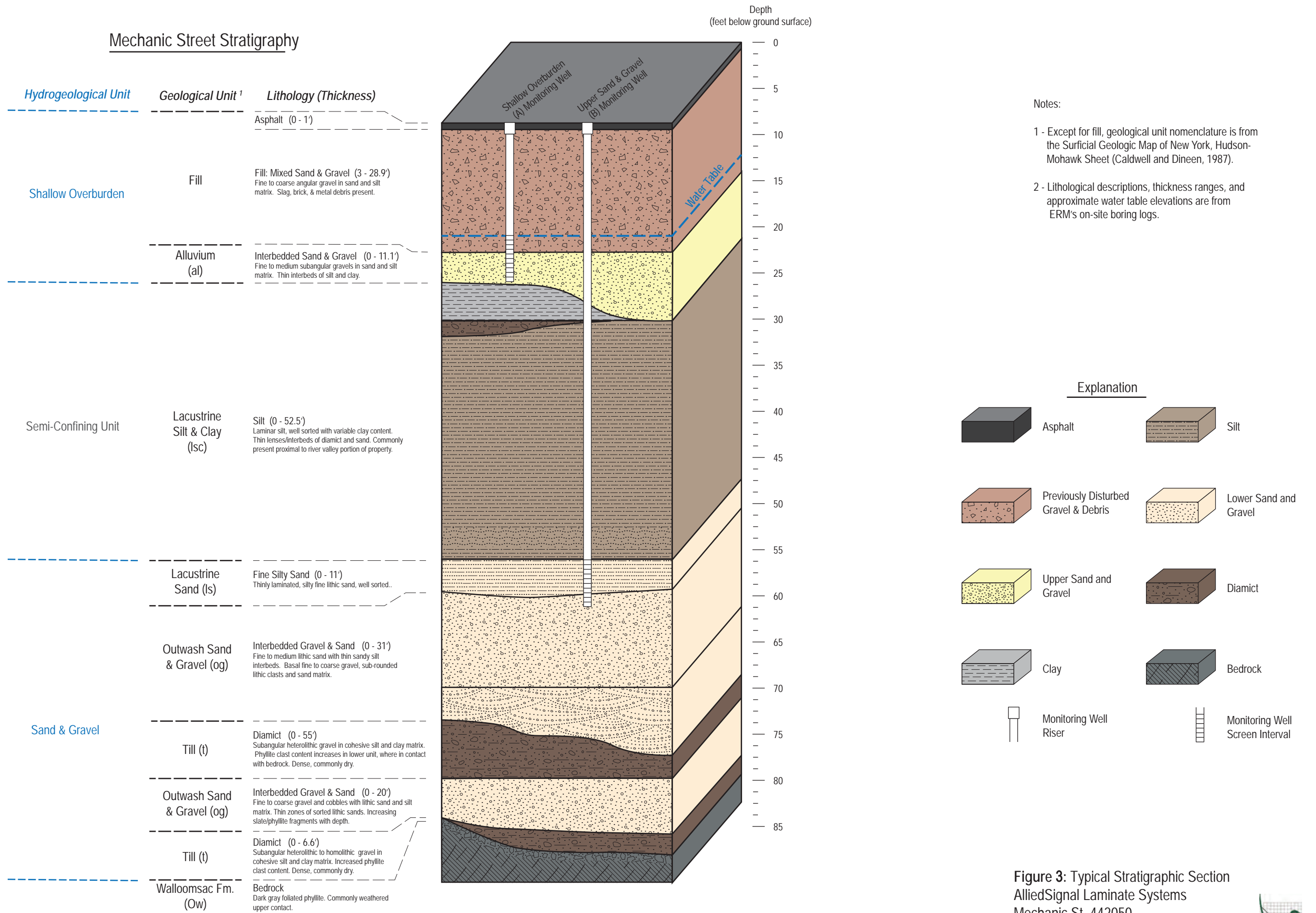
ft. amsl = feet above mean sea level



**Figure 2: Site Layout**  
 AlliedSignal Laminate Systems  
 Mechanic St. 442050  
 Village of Hoosick Falls  
 New York



# Mechanic Street Stratigraphy



Notes:

- 1 - Except for fill, geological unit nomenclature is from the Surficial Geologic Map of New York, Hudson-Mohawk Sheet (Caldwell and Dineen, 1987).
- 2 - Lithological descriptions, thickness ranges, and approximate water table elevations are from ERM's on-site boring logs.

**Figure 3: Typical Stratigraphic Section**  
 AlliedSignal Laminate Systems  
 Mechanic St. 442050  
 Village of Hoosick Falls  
 New York

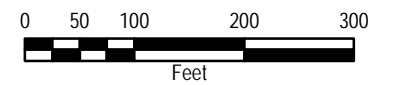






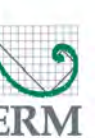
**Legend**

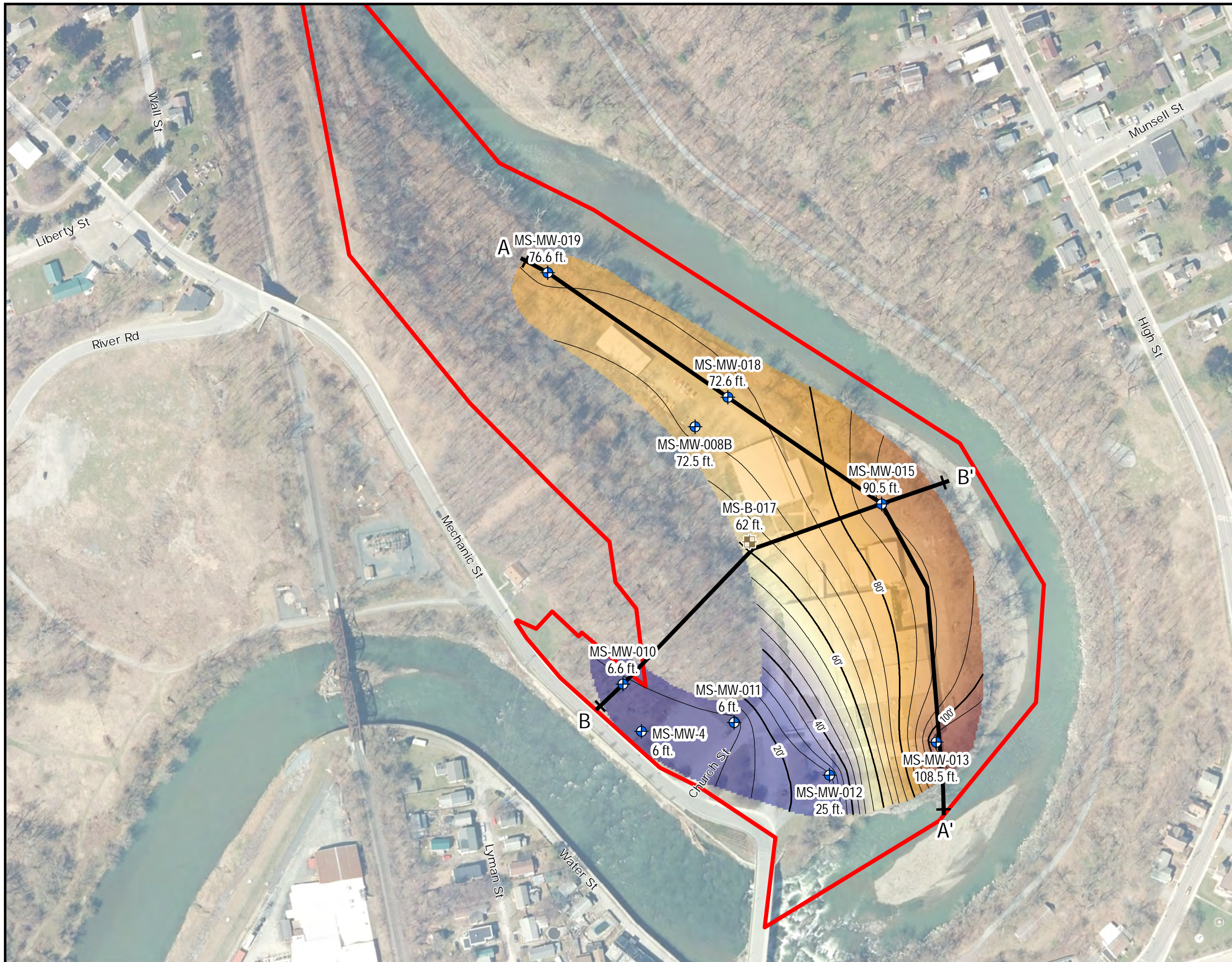
- Site Characterization Soil Boring Location
- Delineation Soil Boring Location
- Surface Soil Sample Location
- Monitoring Well / Soil Boring Location
- Stream Gauge Location
- Possible UST Areas
- Approximate Property Boundary



**Figure 4: Site Characterization Sample Locations**

AlliedSignal Laminate Systems  
 Mechanic St. 442050  
 Village of Hoosick Falls  
 New York





**Legend**

- Monitoring Well / Soil Boring Location
  - Soil Boring Location
  - Cross-Section Profile Trace
  - Overburden Thickness Contour - 20 ft.
  - Overburden Thickness Contour - 5 ft.
  - Approximate Property Boundary
- Interpolated Overburden Thickness (ft.)
- High : 111
  - Low : 4

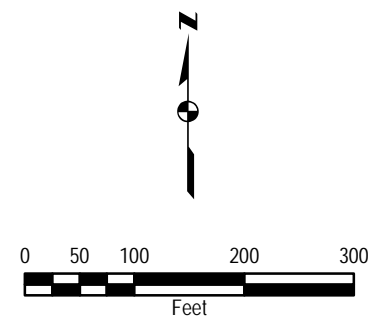
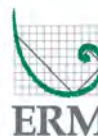
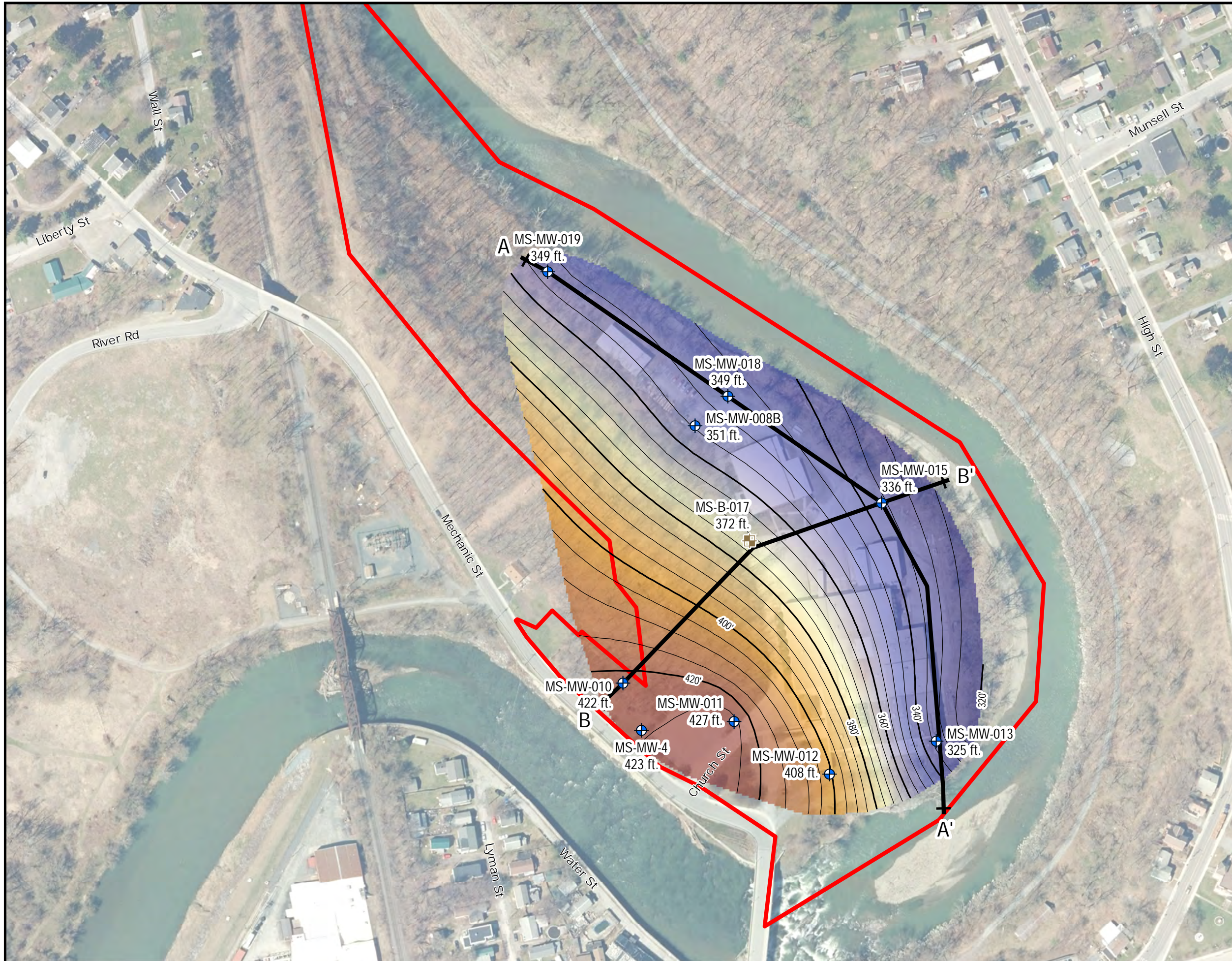


Figure 5: Interpolated Overburden Thickness and Cross-Section Locations  
 AlliedSignals Laminate Systems  
 Mechanic St. 442050  
 Village of Hoosick Falls  
 New York



W:\DMMV\clients\_A\_E\Amidated\Project\Hoosick Falls\MKD\SC Report\Mechanic St - 2019\Figures\_SC\_Overburden\_SectionTraces\_20200323.mxd - Ohira Boling - 6/16/2020



**Legend**

- Monitoring Well / Soil Boring Location
  - Soil Boring Location
  - Cross-Section Profile Trace
  - Bedrock Surface Elevation Contour - 20 ft. amsl
  - Bedrock Surface Elevation Contour - 5 ft. amsl
  - Approximate Property Boundary
- Interpolated Bedrock Surface (ft. amsl)

High : 428  
Low : 319

**NOTES:**

ft. amsl = feet above mean sea level

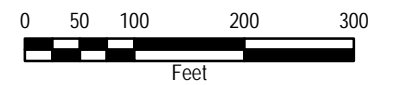
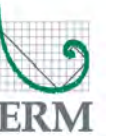
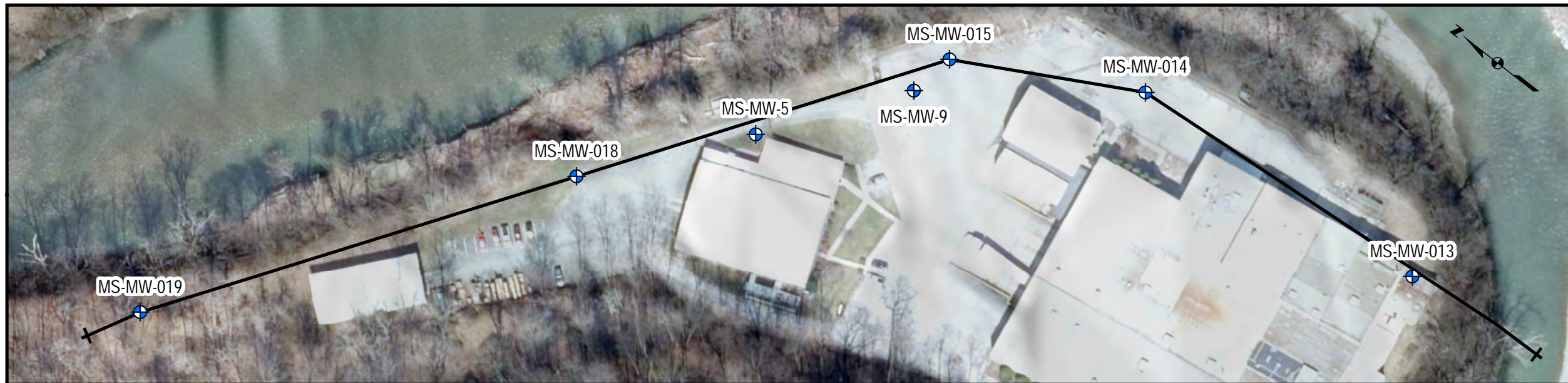


Figure 6: Interpolated Bedrock Surface and Cross-Section Locations  
AlliedSignal Laminate Systems  
Mechanic St. 442050  
Village of Hoosick Falls  
New York

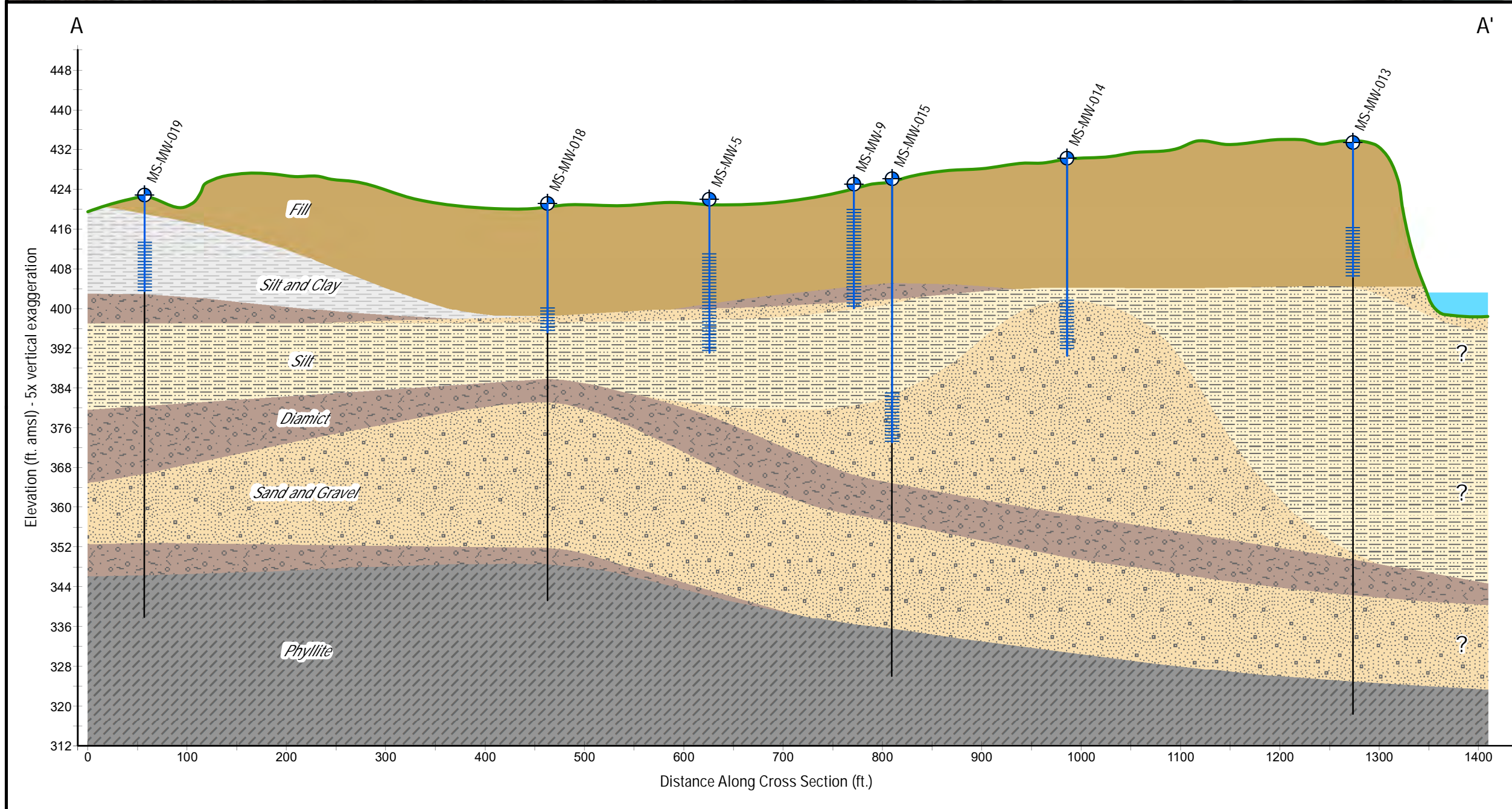




**Legend**

- Monitoring Well Location
- Well Trace
- Monitoring Well Screen
- Borehole Line
- Surface Profile
- Hoosick River
- Lithology**
- Fill
- Clay
- Silt
- Sand and Gravel
- Diamict
- Phyllite

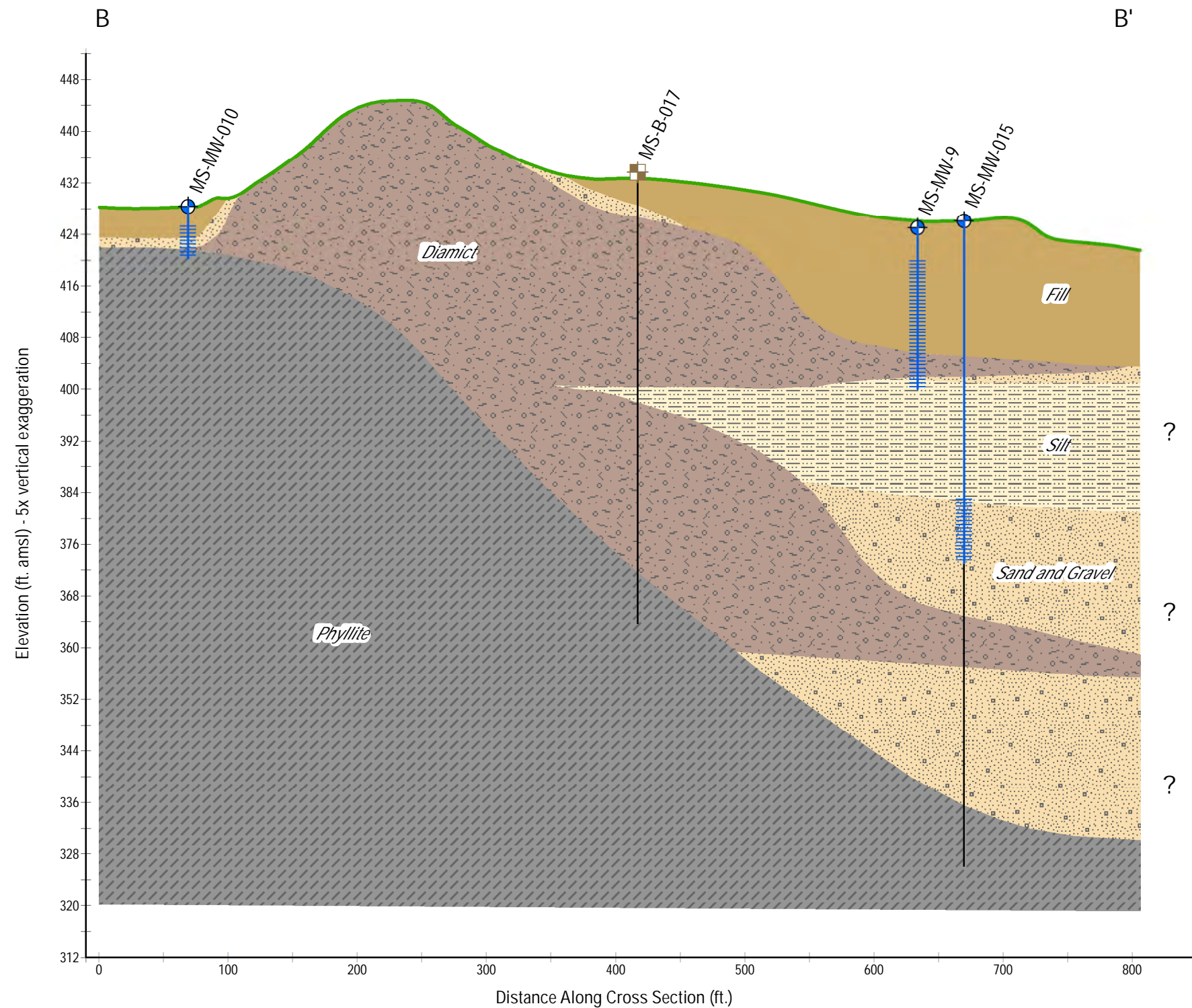
**NOTES:**  
ft. amsl = feet above mean sea level



**Figure 7: Geological Cross Section A-A'**

AlliedSignal Laminate Systems  
Mechanic St. 442050  
Village of Hoosick Falls  
New York



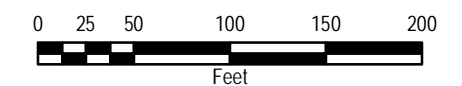


**Legend**

- Soil Boring Location
  - Monitoring Well Location
  - Well Trace
  - Monitoring Well Screen
  - Borehole Line
  - Ground Surface
- Lithology**
- Fill
  - Clay
  - Silt
  - Sand and Gravel
  - Diamict
  - Phyllite

**NOTES:**  
ft. amsl = feet above mean sea level

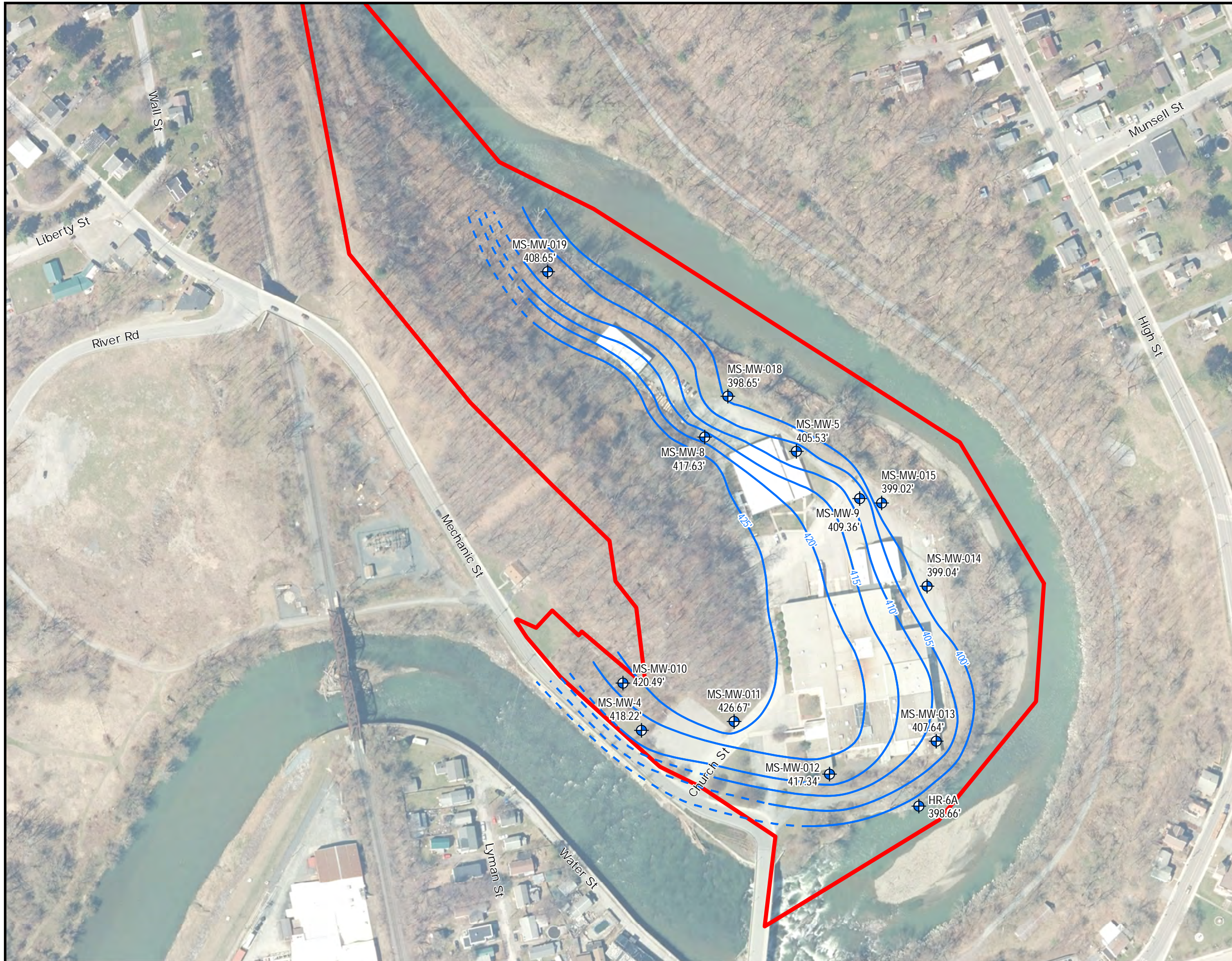
Vertical Exaggeration = 5x



**Figure 8: Geological Cross Section B-B'**

AlliedSignal Laminate Systems  
Mechanic St. 442050  
Village of Hoosick Falls  
New York





**Legend**

- Monitoring Well Location
- Groundwater Elevation Contour - 5 ft. amsl
- Groundwater Elevation Contour - 5 ft. amsl (Inferred)
- Approximate Property Boundary

**NOTES:**

ft. amsl = feet above mean sea level  
 Groundwater elevations recorded at the July 2019 regional gauging event.

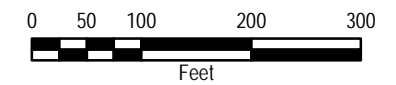
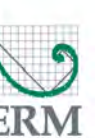
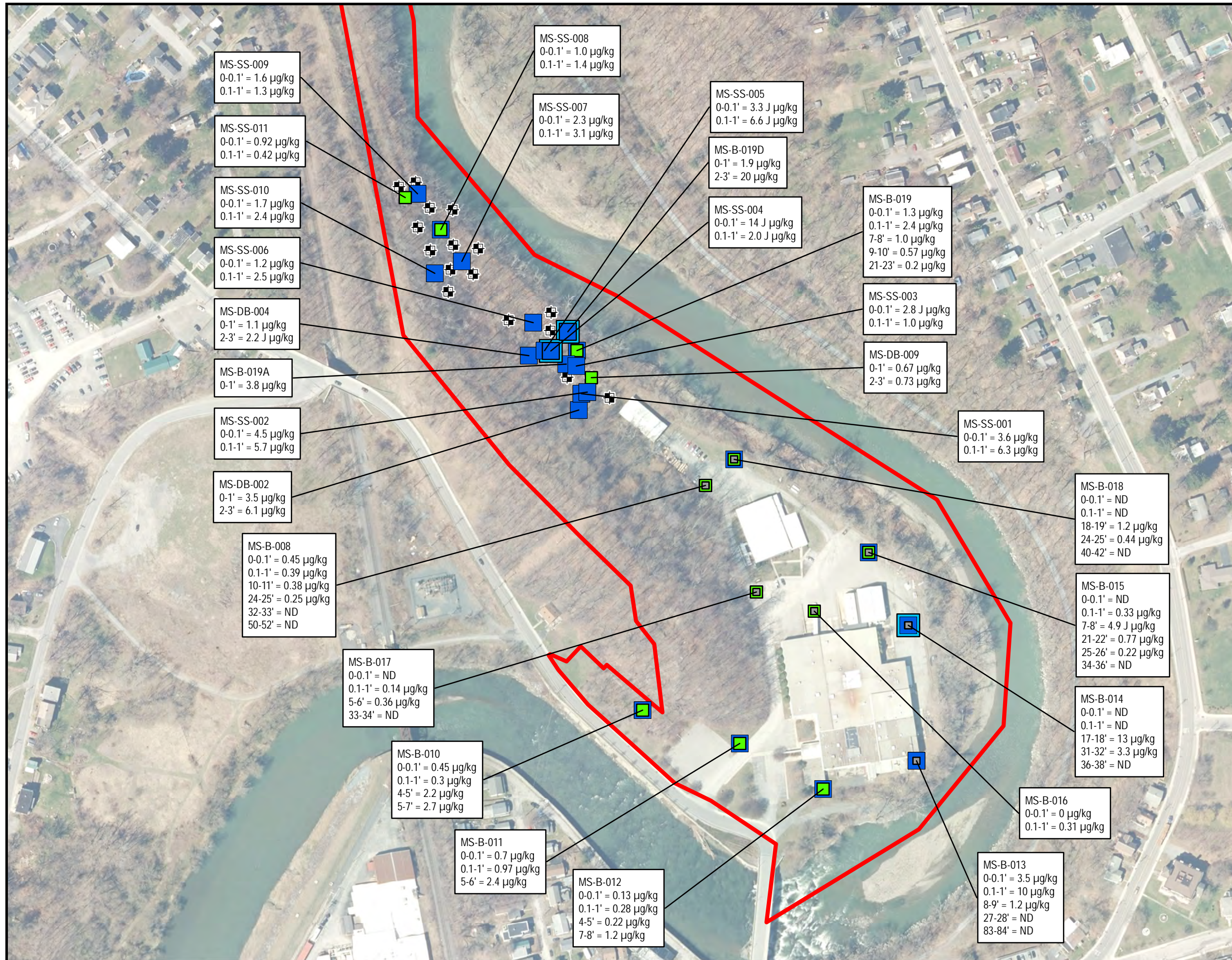


Figure 9: Interpolated Potentiometric Contours  
 AlliedSignal Laminate Systems  
 Mechanic St. 442050  
 Village of Hoosick Falls  
 New York





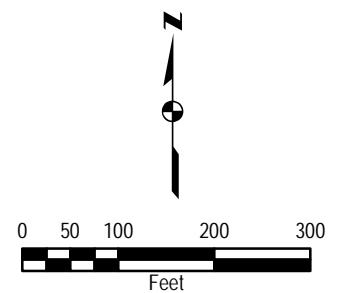
**Legend**

**PFOA Results in Soil (µg/kg)**

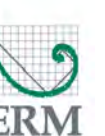
- Non-detect
- DL < 1.0
- 1.0 - < 10
- 10 - 20
- ⊕ Soil Sample Not Analyzed for PFOA
- Approximate Property Boundary

**NOTES:**

PFOA = Perfluorooctanoic Acid  
 µg/kg = micrograms per kilogram  
 J = estimated value  
 DL = detection limit  
 ND = non-detect  
 Analytical samples collected in March and December 2019.



**Figure 10: PFOA Results in Soil**  
 AlliedSignal Laminate Systems  
 Mechanic St. 442050  
 Village of Hoosick Falls  
 New York





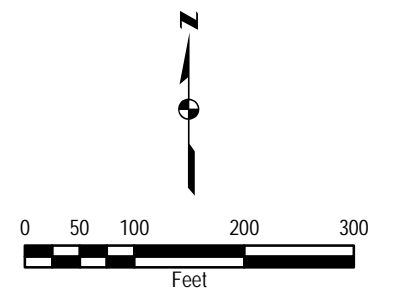
**Legend**

**PFOA Results in Groundwater (ng/l)**

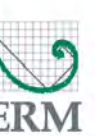
- Non-detect
- DL - <10
- 10 - <100
- 100 - <1,000
- 1,000 - 5,900
- ⊕ Dry Well - Not Sampled
- Approximate Property Boundary

**NOTES:**

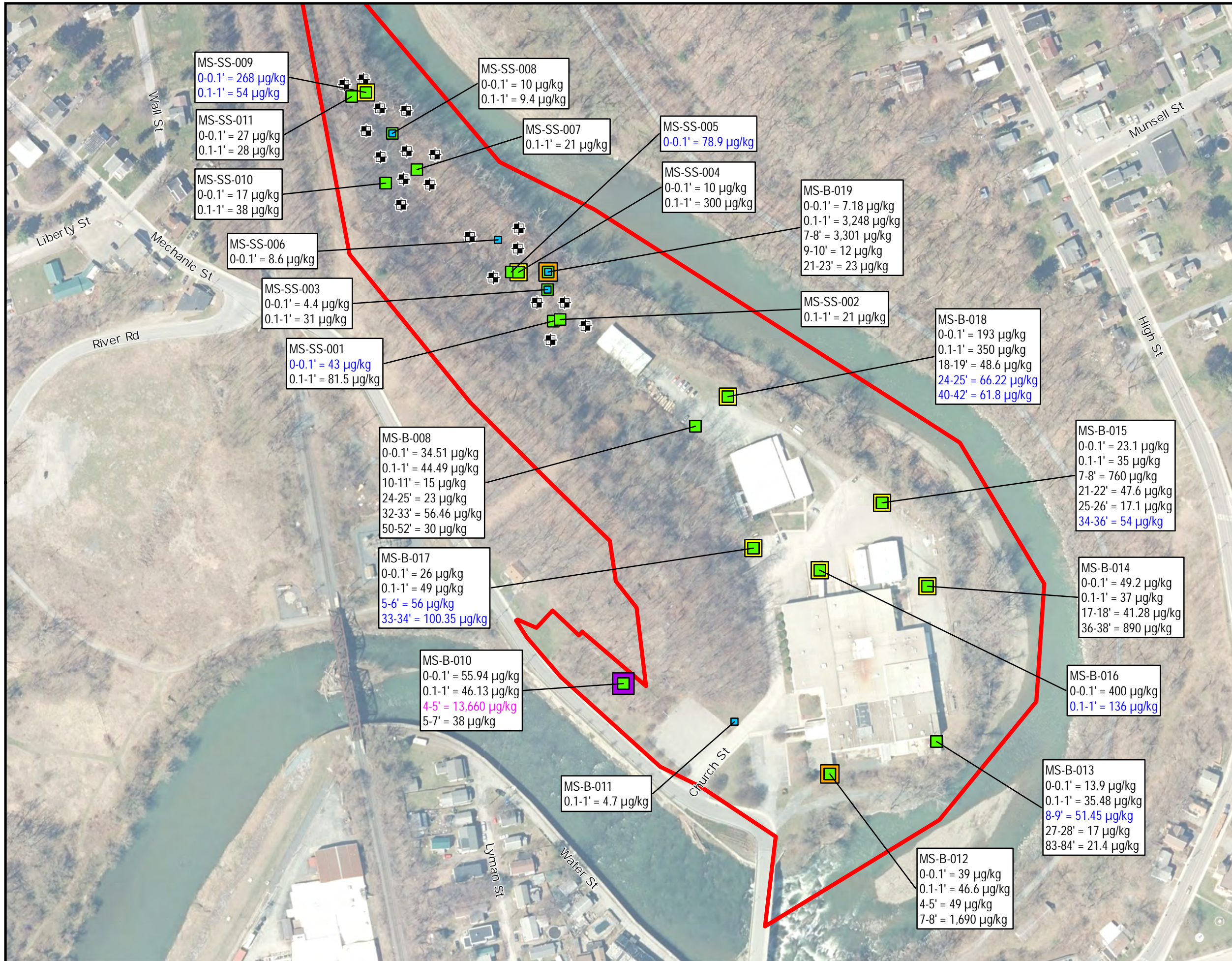
PFOA = Perfluorooctanoic Acid  
 ng/l = nanograms per liter  
 J = estimated value  
 DL = detection limit  
 Analytical samples collected in April 2019



**Figure 11: PFOA Results in Groundwater**  
 AlliedSignal Laminate Systems  
 Mechanic St. 442050  
 Village of Hoosick Falls  
 New York







**Legend**

**VOC Results in Soil**

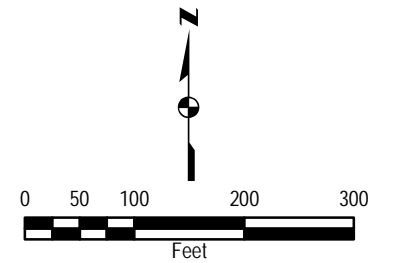
**Total VOCs (µg/kg)**

- 4.4 - <10.0
- 10.0 - <100.0
- 100.0 - <1,000.0
- 1,000.0 - <10,000.0
- 10,000.0 - 13660.0

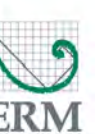
- ⊕ Soil Sample Not Analyzed for VOCs
- ⬡ Approximate Property Boundaries

**NOTES:**

VOC = volatile organic compound  
 µg/kg = micrograms per kilogram  
 15.5 = this TVOC value includes 1,2,4-Trimethylbenzene at a concentration in the soil sample that exceeds its Protection of Groundwater SCO.  
 15.5 = this TVOC value includes Acetone at a concentration in the soil sample that exceeds its Protection of Groundwater SCO.



**Figure 12: VOC Results in Soil**  
 AlliedSignal Laminate Systems  
 Mechanic St. 442050  
 Village of Hoosick Falls  
 New York





**Legend**

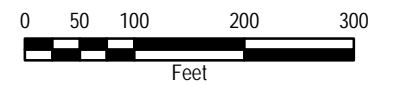
**VOC Results in Groundwater**

**Total VOCs (µg/l)**

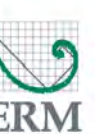
- Non-detect
- DL - <10.0
- 10.0 - 100
- ⊕ Dry Well - Not Sampled
- Approximate Property Boundary

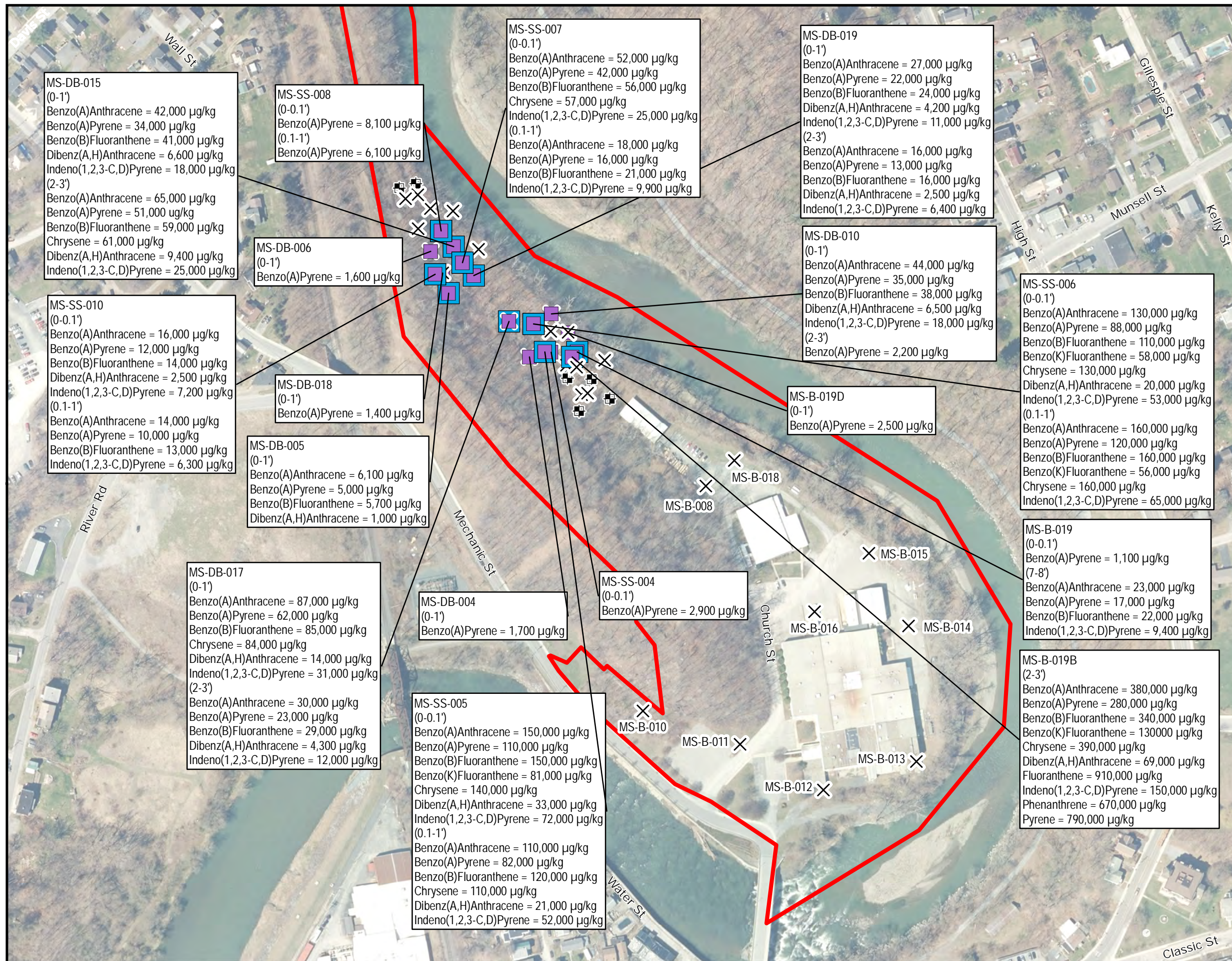
**NOTES:**

VOC = volatile organic compound  
 µg/l = micrograms per liter  
 DL = detection limit  
 Analytical samples collected in April 2019



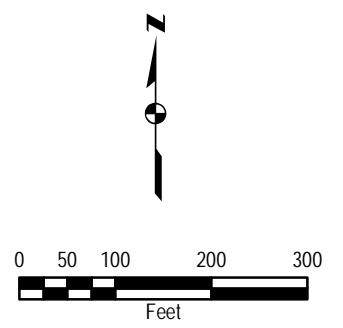
**Figure 13: VOC Results in Groundwater**  
 AlliedSignal Laminate Systems  
 Mechanic St. 442050  
 Village of Hoosick Falls  
 New York






- Legend**
- × No Exceedance
  - Industrial SCO Exceedance
  - Commercial SCO Exceedance
  - ⊕ Soil Sample Not Analyzed for SVOCs
  - Approximate Property Boundaries

**NOTES:**  
 SVOC = semivolatile organic compound  
 SCO = soil cleanup objective  
 µg/kg = microgram per kilogram



**Figure 14: SVOC Results in Soil**  
 AlliedSignal Laminate Systems  
 Mechanic St. 442050  
 Village of Hoosick Falls  
 New York





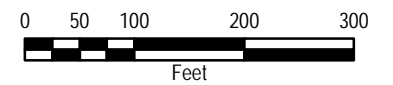
**Legend**

**SVOC Results in Groundwater**

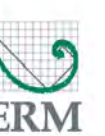
- ✕ No Exceedance
- NY TOGS 1,1,1 GA Standard Exceedance
- NY TOGS 1,1,1 GA Guidance Exceedance
- ⊕ Dry Well - Not Sampled
- Approximate Property Boundary

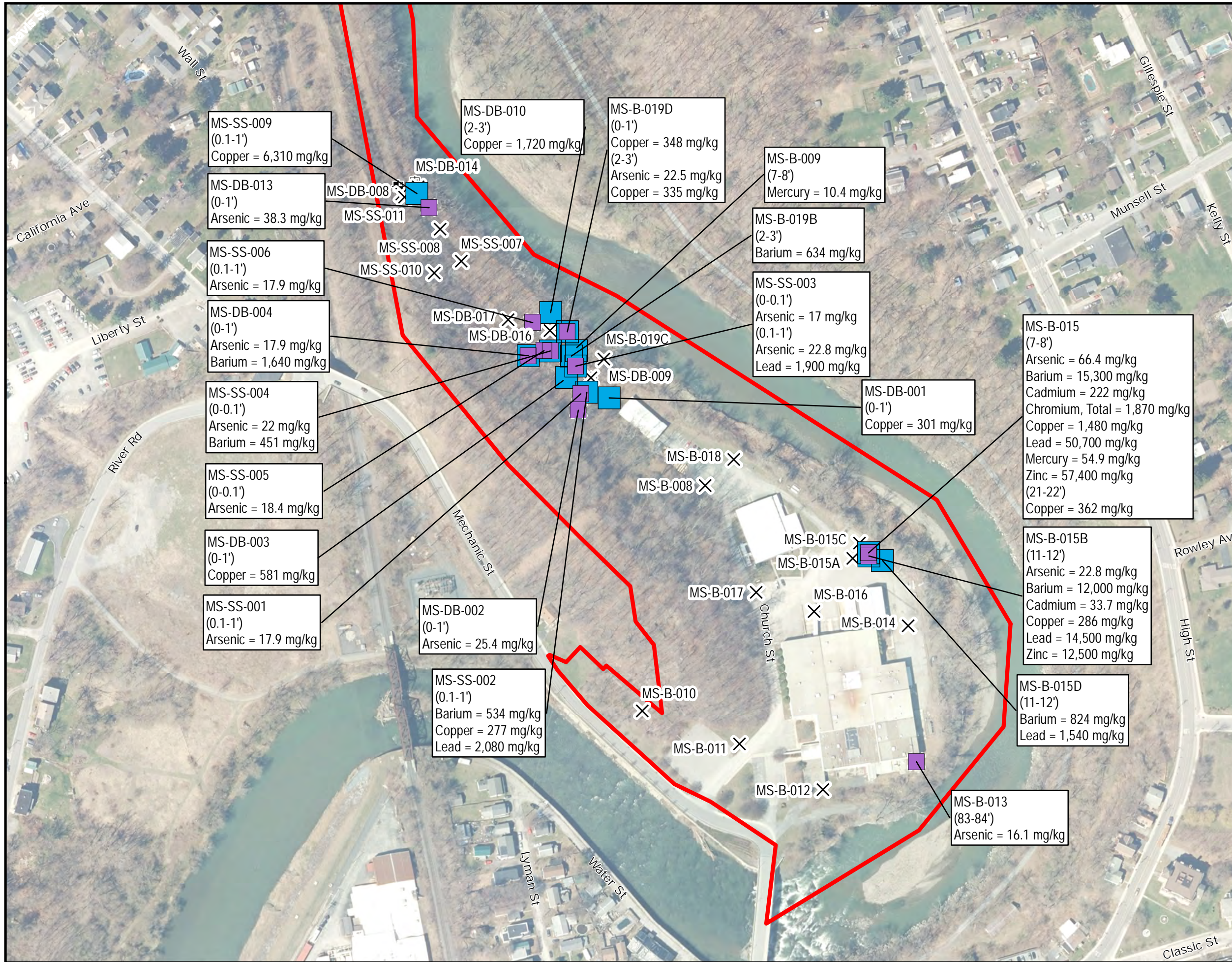
**NOTES:**

SVOC = semi-volatile organic compound



**Figure 15: SVOC Results in Groundwater**  
 AlliedSignal Laminate Systems  
 Mechanic St. 442050  
 Village of Hoosick Falls  
 New York





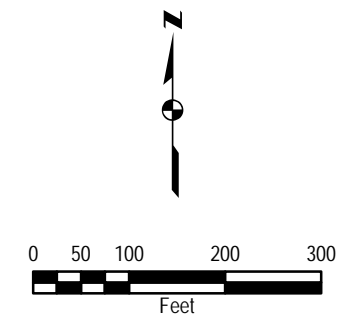
**Legend**

**Metals Results in Soil**

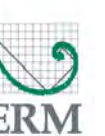
- ✕ No Exceedance
- Industrial SCO Exceedance
- Commercial SCO Exceedance
- ⊕ Soil Sample Not Analyzed for SVOCs
- Approximate Property Boundary

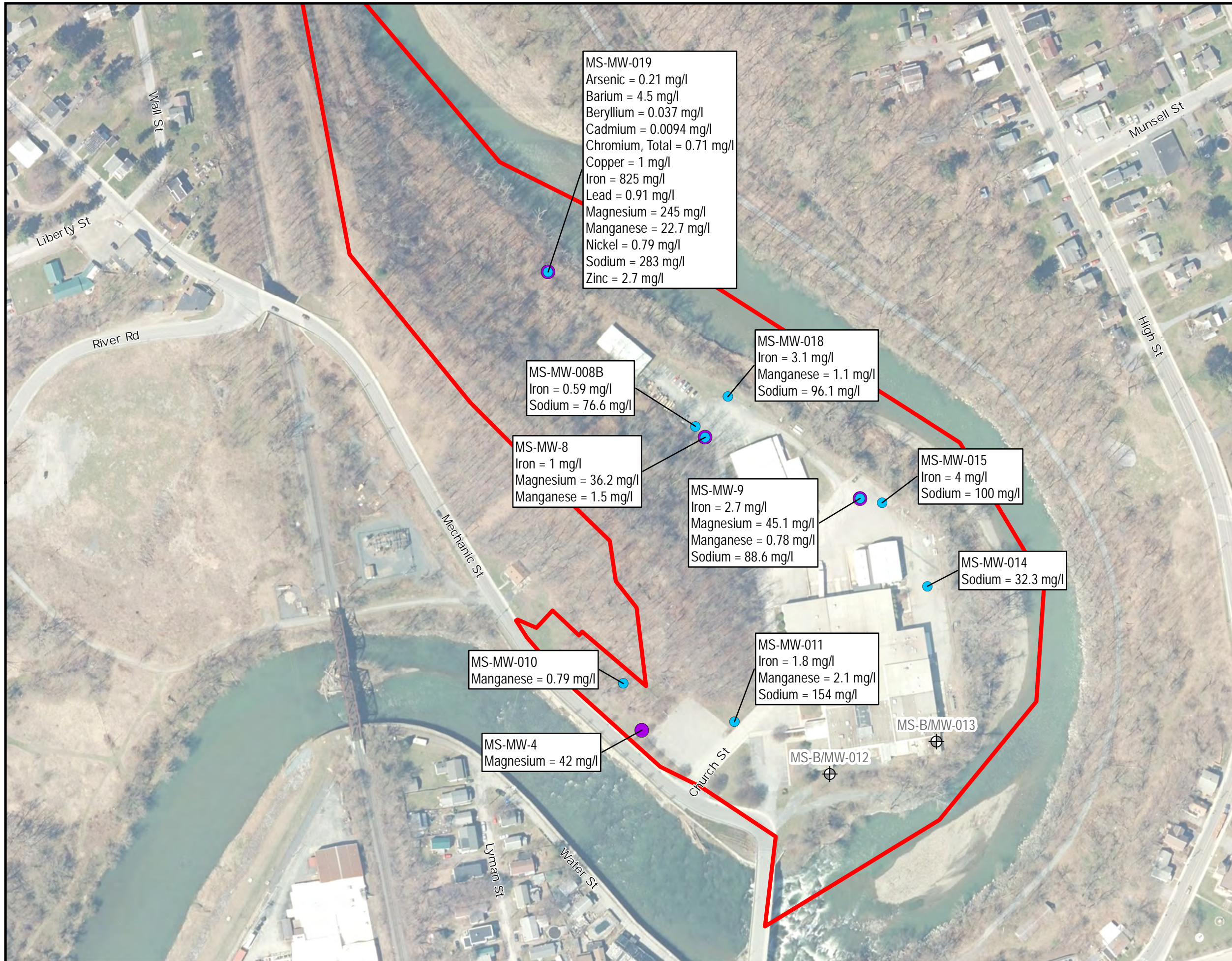
**NOTES:**

SCO = soil cleanup objective  
mg/kg = milligrams per kilogram



**Figure 16: Metals Results in Soil**  
AlliedSignal Laminate Systems  
Mechanic St. 442050  
Village of Hoosick Falls  
New York





MS-MW-019  
 Arsenic = 0.21 mg/l  
 Barium = 4.5 mg/l  
 Beryllium = 0.037 mg/l  
 Cadmium = 0.0094 mg/l  
 Chromium, Total = 0.71 mg/l  
 Copper = 1 mg/l  
 Iron = 825 mg/l  
 Lead = 0.91 mg/l  
 Magnesium = 245 mg/l  
 Manganese = 22.7 mg/l  
 Nickel = 0.79 mg/l  
 Sodium = 283 mg/l  
 Zinc = 2.7 mg/l

MS-MW-008B  
 Iron = 0.59 mg/l  
 Sodium = 76.6 mg/l

MS-MW-8  
 Iron = 1 mg/l  
 Magnesium = 36.2 mg/l  
 Manganese = 1.5 mg/l

MS-MW-9  
 Iron = 2.7 mg/l  
 Magnesium = 45.1 mg/l  
 Manganese = 0.78 mg/l  
 Sodium = 88.6 mg/l

MS-MW-10  
 Manganese = 0.79 mg/l

MS-MW-4  
 Magnesium = 42 mg/l

MS-MW-011  
 Iron = 1.8 mg/l  
 Manganese = 2.1 mg/l  
 Sodium = 154 mg/l

MS-MW-018  
 Iron = 3.1 mg/l  
 Manganese = 1.1 mg/l  
 Sodium = 96.1 mg/l

MS-MW-015  
 Iron = 4 mg/l  
 Sodium = 100 mg/l

MS-MW-014  
 Sodium = 32.3 mg/l

MS-B/MW-013

MS-B/MW-012



Legend

- Metals Results in Groundwater
- × No Exceedance
  - NY TOGS 1,1,1 GA Standard Exceedance
  - NY TOGS 1,1,1 GA Guidance Exceedance
  - ⊕ Dry Well - Not Sampled
  - Approximate Property Boundary

NOTES:  
 mg/l = milligrams per liter

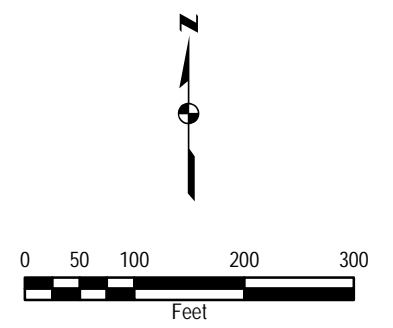


Figure 17: Metals Results in Groundwater  
 AlliedSignal Laminate Systems  
 Mechanic St. 442050  
 Village of Hoosick Falls  
 New York

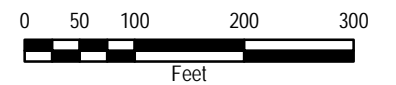




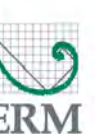
**Legend**

**Pesticide Results in Soil**

- ✕ No Exceedance
- Commercial SCO Exceedance
- Industrial SCO Exceedance
- Soil Sample Not Analyzed for Pesticides
- Approximate Property Boundary



**Figure 18: Pesticide Results in Soil**  
 AlliedSignal Laminate Systems  
 Mechanic St. 442050  
 Village of Hoosick Falls  
 New York





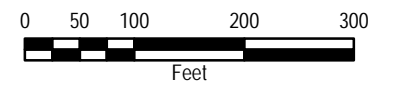
**Legend**

**Pesticides Results in Groundwater**

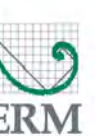
- ✕ No Exceedance
- Data Not Usable
- NY TOGS 1,1,1 GA Standard Exceedance
- NY TOGS 1,1,1 GA Guidance Exceedance
- ⊕ Dry Well - Not Sampled
- Approximate Property Boundary

**NOTES:**

Analytical samples collected in April 2019



**Figure 19: Pesticides Results in Groundwater**  
 AlliedSignal Laminate Systems  
 Mechanic St. 442050  
 Village of Hoosick Falls  
 New York





## **TABLES**

- 1 Summary of Records Search**
- 2 Summary of Site Characterization Tasks**
- 3 Summary of Site Characterization Samples**
- 4 Monitoring Well Construction Details**
- 5 Analytical Results for PFOA and Other PFAS, pH and TOC: Soil Samples**
- 6 Analytical Results for PFOA and Other PFAS, pH and TOC: Groundwater Samples**
- 7 Analytical Results for Metals, Pesticides, PCBs, VOCs and SVOCs: Soil Samples**
- 8 Analytical Results for Metals, Pesticides, PCBs, VOCs and SVOCs: Groundwater Samples**
- 9 Summary of Analytical Methods**
- 10 Investigative Derived Wastes**



**Table 1**  
**Summary of Records Search**  
**Mechanic Street Site**

Site Name & Address	EDR Radius Map™ Report with Geocheck®	EDR Historical Topographic Maps	EDR Historical Sanborn Maps	Historical Aerial Photographs	EDR City Directories	On-Line Historical Images
Mechanic St Site, Hoosick Falls, New York	<p><b>ISOLA Laminate Systems</b>, spills closed 1991, 1992, and 1993.</p> <p><b>Norplex Oak Mechanic St</b>, Glycol spill closed 1990.</p> <p><b>Allied Signal Fluorglas Mechanic St</b>, four spills closed from 1993 to 1994.</p> <p><b>Hoosick River Below Church St</b>, 0.001 miles from the site, spill closed 1999.</p> <p><b>William Wyman Church St</b>, 0.045 miles S of the site, spill closed 2011.</p> <p><b>Dooley Res 19 Mechanic St</b>, 0.095 miles WNW of the site, residential spill closed 1987.</p> <p><b>Cummings Property 62 High St</b>, 0.100 miles NE of the site, spill closed 2014.</p> <p><b>Rite Aid 22 Main St</b>, 0.101 miles SSE of the site, spills closed 2004 and 2009.</p> <p><b>Gorman Res 20 Mechanic St</b>, 0.108 miles WNW of the site, spill closed in 1996.</p> <p><b>Cumberland Farms 3239 Church St</b>, 0.110 miles S of the site, multiple spills closed in 2008 and 2009.</p> <p><b>Interface Performance Materials 12 Davis St</b>, 0.118 miles NW of the site, spills closed 1990, 1995, 2004, 2007, and 2011.</p> <p><b>Former Oak Materials 3 Lyman St</b>, 0.120 miles SSW of the site, classified as a significant threat to the public health or environment.</p> <p><b>Saint Gobain Performance Plastics 1 Liberty St</b>, 0.166 miles WNW of the site, classified as a significant threat to the public health or environment.</p>	<p>ERM reviewed historical topographic maps dated 1897, 1900, 1943, 1944, 1946, 1980, 1995, and 2013.</p>	<p>ERM reviewed historical Sanborn maps dated 1904, 1910, and 1945.</p>	<p>ERM reviewed historical aerial photographs dated 1942, 1951, 1960, 1978, 1986, 1994, 2006, 2009, 2013, and 2017.</p>	<p>ERM reviewed city directories for the subject property dated 1973, 1989, 1992, 1995, 2000, 2005, 2010, and 2014.</p>	<p>The historical images available and reviewed on Google Earth cover the years 1994, 2006, 2007, 2008, 2009, 2011, and 2014.</p>

\*\* EDR Radius Map™ Report with Geocheck® - Information gathered using the following databases: RCRA-CESQG, NY AST, FINDS, NY Manifest, ECHO, NY UST, NY LTANKS, NY AIRS, ICIS

**Table 2**  
**Summary of Site Characterization Tasks**  
**Mechanic Street Site**

<b>Site Characterization Tasks</b>	<b>Methods/Rationale</b>	<b>Investigation Areas</b>
Surface / Near Surface Soil Sampling	<ul style="list-style-type: none"> <li>• Stainless steel hand auger for surface soil samples 0 to 2 inches below vegetative cover (root mass included)</li> <li>• Stainless steel hand auger for near surface soil samples 2 to 12 inches below vegetative cover</li> <li>• Characterization of soil quality</li> </ul>	<ul style="list-style-type: none"> <li>• 22 On site soil boring locations</li> </ul>
Subsurface Soil Sampling	<ul style="list-style-type: none"> <li>• Soil borings advanced to the top of bedrock or drilling refusal</li> <li>• Boreholes sampled continuously</li> <li>• Headspace PID readings</li> <li>• Characterization of soil quality</li> </ul>	<ul style="list-style-type: none"> <li>• 11 On site soil boring locations</li> </ul>
Fixed monitoring well installations and groundwater sampling	<ul style="list-style-type: none"> <li>• Roto-sonic drilling method for construction of monitoring wells except for MS-MW-10 which was installed using Direct Push methodology</li> <li>• Low-flow purging/sampling using peristaltic or inertial pumping systems</li> <li>• Characterization of groundwater quality</li> </ul>	<ul style="list-style-type: none"> <li>• Screen interval (A) straddling or just below water table</li> <li>• Screen interval (B) below the clay unit</li> <li>• Screen intervals (C) and (D) near the bottom of overburden</li> <li>• 9 new On site wells</li> <li>• 4 pre-existing On site wells</li> </ul>
Surface and Near Surface Soil Delineation Sampling	<ul style="list-style-type: none"> <li>• Stainless steel hand auger for near surface soil samples 0 to 12 inches below vegetative cover</li> <li>• Delineate metals and PAHs</li> <li>• Select PFAS sampling as per NYS DEC request</li> </ul>	<ul style="list-style-type: none"> <li>• 22 On site soil boring locations</li> </ul>
Subsurface Soil Delineation Sampling	<ul style="list-style-type: none"> <li>• Soil borings advanced to defined depth intervals</li> <li>• Delineate metals and PAHs</li> <li>• Select PFAS sampling as per NYS DEC request</li> </ul>	<ul style="list-style-type: none"> <li>• 29 On site soil boring locations</li> </ul>
Geophysical Surveys	<ul style="list-style-type: none"> <li>• Private utility locator to confirm utilities marked out through Dig Safely New York (DSNY) system in areas proposed for subsurface investigation.</li> <li>• Ground-penetrating radar (GPR)</li> <li>• Magnetometry/metal detection</li> <li>• Inductive cable/pipe location</li> </ul>	<ul style="list-style-type: none"> <li>• All drilling locations</li> <li>• A suspect underground storage tank (UST) location on east side of Site</li> <li>• At minimum, a 10-foot diameter radius around each planned drilling location was scanned for subsurface utilities prior to the initiation of the work.</li> <li>• Proposed sampling locations were adjusted in the field, as necessary, based on the results of subsurface clearance effort</li> </ul>

**Table 3**  
**Summary of Site Characterization Samples**  
**Mechanic Street Site**

Sample Name	PFAS	VOCs	Metals	CN	SVOCs	TOC	PCBs	Pest-icides	pH	Other *	Notes
Soil											
EB (03122019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-B-011(0.1-1.0)(03122019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-B-011(0-0.1)(03122019)	X	X	X	X	X/X	X	X	X	X		
MS-B-012(0-0.1)(03122019)	X	X	X	X	X/X	X	X	X	X		
MS-B-012(0.1-1.0)(03122019)	X	X	X	X	X/X	X	X	X	X		
MS-B-013(0-0.1)(03122019)	X	X	X	X	X/X	X	X	X	X		
MS-B-013(0.1-1.0)(03122019)	X	X	X	X	X/X	X	X	X	X		
MS-B-014(0-0.1)(03122019)	X	X	X	X	X/X	X	X	X	X		
MS-B-014(0.1-1.0)(03122019)	X	X	X	X	X/X	X	X	X	X		
MS-B-015(0-0.1)(03122019)	X	X	X	X	X/X	X	X	X	X		
MS-B-015(0.1-1.0)(03122019)	X	X	X	X	X/X	X	X	X	X		
MS-B-016(0-0.1)(03132019)	X	X	X	X	X/X	X	X	X	X		
MS-B-016(0.1-1.0)(03132019)	X	X	X	X	X/X	X	X	X	X		
MS-B-017 (0-0.1) (03132019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-B-017 (0.1-1.0) (03132019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-B-018 (0-0.1) (03132019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-B-018 (0.1-1.0) (03132019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-B-008 (0-0.1) (03132019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane. ERM ID changed, per Erin O.
MS-B-008 (0.1-1.0) (03132019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane. ERM ID changed, per Erin O.
MS-B-019 (0.1-1.0) (03132019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-B-010 (0-0.1) (03142019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-B-010 (0.1-1.0) (03142019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-B-010(4-5) (03142019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-DUP (03142019) MS-B-010(4-5)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-B-011(5-6) (03142019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-B-011(5-6) (03142019) MS	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-B-011(5-6) (03142019) MSD	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
EB (03152019)		X	X	X	X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-B-012(7-8)(03142019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-B-012(4-5)(03142019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-B-013(8-9)(03142019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-B-013(27-28)(03142019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-B-013 (83-84) (03182019)	X	X	X	X	X/X	X	X	X	X	X	SVOC includes 1,4-Dioxane
MS-B-019 (0-0.1) (03192019)		X	X	X	X/X	X	X	X	X	X	SVOC includes 1,4-Dioxane
MS-B-019 (0-0.1) (03182019)	X									X	
DUP (03192019) MS-B-019(21-23)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-B-019(7-8)(03192019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-B-019(9-10)(03192019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-B-019(21-23)(03192019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-B-008(10-11)(03202019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-B-008(32-33)(03202019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-B-008(24-25)(03202019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-B-008(50-52)(03202019)	X	X	X	X	X/X	X	X	X	X		report revised to include add'l metals. SVOC includes 1,4-Dioxane
MS-B-018(18-19)(03212019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-B-018(24-25)(03212019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-B-018 (40-42) (03212019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-B-018 (40-42) (03212019) MS	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-B-018 (40-42) (03212019) MSD	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-B-017 (5-6) (03222019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-B-017 (33-34) (03222019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-B-015(7-8)(03262019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-B-015(21-22)(03262019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-B-015(25-26)(03262019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-B-015(34-36)(03262019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
EB-Sonic Lines (03282019)	X	X	X	X	X	X	X	X	X		No ASP B for this sample. Its part of 480-151021
MS-B-014 (17-18)(03272019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-B-014 (31-32)(03272019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-B-014 (36-38)(03272019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
DUP (03272019) MS-B-014 (31-32)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane

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Sample Name	PFAS	VOCs	Metals	CN	SVOCs	TOC	PCBs	Pest-icides	pH	Other *	Notes
Soil											
MS-B-016 (0.1-1.0)(03282019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane. Re-collected sample (see 480-150281). Package revised to include (9045D).
MS-B-010(5-7)(04012019)	X	X		X		X			X		
EB(04032019)	X	X	X	X	X	X	X	X	X		
MS-SS-001(0.1-1)(04032019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-SS-002(0.1-1)(04032019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-SS-003(0.1-1)(04032019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-SS-003(0-0.1)(04032019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-SS-004(0-0.1)(04032019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
DUP(04032019) MS-SS-004(0-0.1)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-SS-004(0.1-1)(04032019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-SS-005(0.1-1)(04032019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-SS-005(0-0.1)(04032019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-SS-001(0-0.1)(04032019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-SS-002(0-0.1)(04032019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-SS-006(0.1-1)(04032019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-SS-006(0-0.1)(04032019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-SS-007(0-0.1)(04032019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-SS-007(0.1-1)(04032019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-SS-008(0-0.1)(04032019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-SS-008(0.1-1)(04032019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-SS-009(0-0.1)(04032019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-SS-009(0-0.1)(04032019) MS	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-SS-009(0-0.1)(04032019) MSD	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-SS-009(0.1-1)(04032019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-SS-010(0-0.1)(04032019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-SS-010(0.1-1)(04032019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-SS-011(0-0.1)(04032019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-SS-011(0.1-1)(04032019)	X	X	X	X	X/X	X	X	X	X		SVOC includes 1,4-Dioxane
MS-B-015A(11-12)(12032019)			X								
MS-B-015B(11-12)(12032019)			X								
MS-B-015C(7-8)(12032019)			X								
MS-B-015C(11-12)(12032019)			X								
MS-B-015D(11-12)(12042019)			X								
MS-DB-001(0-1)(12042019)			X								
MS-DB-002(0-1)(12042019)	X		X								
MS-DB-002(2-3)(12042019)	X		X								
MS-DB-003(0-1)(12042019)			X								
MS-DUP-01(12042019) MS-DB-003(0-1)(12042019)			X								
MS-DB-004(2-3)(12042019)	X		X		X						
MS-DB-004(2-3)(12042019) MS	X		X		X						
MS-DB-004(2-3)(12042019) MSD	X		X		X						
MS-DB-004(0-1)(12042019)	X		X		X						
MS-DUP-02(12042019) MS-DB-004(0-1)(12042019)	X		X		X						
MS-DB-003(2-3)(12042019)			X								
MS-DB-003(2-3)(12042019) MS			X								
MS-DB-003(2-3)(12042019) MSD			X								
MS-B-015A(7-8)(12032019)			X								
MS-B-015D(7-8)(12042019)			X								
MS-DB-005(0-1)(12042019)					X						
MS-DB-005(0-1)(12042019) MS					X						
MS-DB-005(0-1)(12042019) MSD					X						
MS-DB-005(2-3)(12042019)					X						
MS-DUP-03(12042019) MS-DB-005(2-3)(12042019)					X						
MS-DB-006(0-1)(12042019)					X						
MS-DB-006(02-3)(12042019)					X						
MS-DB-007(0-1)(12052019)					X						
MS-DB-007(2-3)(12052019)					X						
MS-DB-008(0-1)(12052019)			X								
MS-DB-008(0-1)(12052019) MS			X								
MS-DB-008(0-1)(12052019) MSD			X								
MS-DB-008(2-3)(12052019)			X								
MS-DUP-04(12052019) MS-DB-008(2-3)(12052019)			X								

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Sample Name	PFAS	VOCs	Metals	CN	SVOCs	TOC	PCBs	Pesticides	pH	Other *	Notes
<b>Soil</b>											
MS-DB-009(2-3)(12052019)	X		X								
MS-B-019A(0-1)(12052019)	X				X						
MS-B-019A(2-3)(12052019)			X		X						
MS-B-019A(7-8)(12052019)			X		X						
MS-B-019A(11-12)(12052019)			X		X						
MS-B-019B(0-1)(12052019)			X		X						
MS-B-019B(2-3)(12052019)			X		X						
MS-B-019B(11-12)(12052019)			X		X						
MS-B-019C(0-1)(12052019)			X		X						
MS-B-019C(2-3)(12052019)			X		X						
MS-B-019D(0-1)(12052019)	X		X		X						
MS-B-019D(2-3)(12052019)	X		X		X						
MS-DB-010(0-1)(12052019)					X						
MS-DB-010(2-3)(12052019)			X		X						
MS-DB-011(0-1)(12052019)					X						
MS-DB-011(2-3)(12052019)					X						
MS-DB-012(0-1)(12052019)					X						
MS-DB-012(2-3)(12052019)					X						
MS-DB-013(0-1)(12052019)			X		X						
MS-DB-013(2-3)(12052019)			X		X						
MS-DB-014(0-1)(12052019)			X								
MS-DB-014(2-3)(12052019)			X								
MS-DB-015(0-1)(12052019)					X						SVOC = 1,4-D only
MS-DB-015(2-3)(12052019)					X						SVOC = 1,4-D only
MS-DB-016(0-1)(12052019)			X		X						SVOC = 1,4-D only
MS-DB-016(2-3)(12052019)			X		X						SVOC = 1,4-D only
MS-DB-017(0-1)(12052019)			X		X						SVOC = 1,4-D only
MS-DB-017(2-3)(12052019)			X		X						SVOC = 1,4-D only
MS-DB-018(0-1)(12052019)					X						SVOC = 1,4-D only
MS-DB-018(2-3)(12052019)					X						SVOC = 1,4-D only
MS-DB-019(0-1)(12052019)					X						SVOC = 1,4-D only
MS-DB-019(2-3)(12052019)					X						SVOC = 1,4-D only
MS-EB(12032019)	X		X		X						SVOC = TCL + STARS
MS-EB(12042019)	X		X		X						SVOC = TCL + STARS
MS-EB(12052019)	X		X		X						SVOC = TCL + STARS
<b>Groundwater</b>											
MS-MW-008B (04232019)	X	X	X	X	X/X	X	X	X	X		SVOC SIM includes 1,4-Dioxane
MS-MW-008B (04232019) MS	X	X	X	X	X/X	X	X	X	X		SVOC SIM includes 1,4-Dioxane
MS-MW-008B (04232019) MSD	X	X	X	X	X/X	X	X	X	X		SVOC SIM includes 1,4-Dioxane
MS-MW-8 (04232019)	X	X	X	X	X/X	X	X	X	X		SVOC SIM includes 1,4-Dioxane
MS-MW-018 (04232019)	X	X	X	X	X/X	X	X	X	X		SVOC SIM includes 1,4-Dioxane
MS-MW-9 (04232019)	X	X	X	X	X/X	X	X	X	X		SVOC SIM includes 1,4-Dioxane
MS-MW-010 (04232019)	X	X	X	X	X/X	X	X	X	X		SVOC SIM includes 1,4-Dioxane
EB (04232019)	X	X	X	X	X/X	X	X	X	X		SVOC SIM includes 1,4-Dioxane
EB (04242019)	X	X	X	X	X/X	X	X	X	X		SVOC SIM includes 1,4-Dioxane
MS-TB (04232019)		X									
MS-MW-019(04242019)	X	X	X	X	X/X	X	X	X	X		SVOC SIM includes 1,4-Dioxane
MS-MW-011(04242019)	X	X	X	X	X/X	X	X	X	X		SVOC SIM includes 1,4-Dioxane
MS-MW-4(04242019)	X	X	X	X	X/X	X	X	X	X		SVOC SIM includes 1,4-Dioxane
MS-MW-014(04242019)	X	X	X	X	X/X	X	X	X	X		SVOC SIM includes 1,4-Dioxane
MS-MW-015(04242019)	X	X	X	X	X/X	X	X	X	X		SVOC SIM includes 1,4-Dioxane
MS-MW-DUP(04242019) MS-MW-01	X	X	X	X	X/X	X	X	X	X		SVOC SIM includes 1,4-Dioxane
MS-TB(04242019)		X									
<b>Waste Characterization</b>											
WC-20MS(06052019)		X	X	X	X		X	X	X	X	
WC-21MS 06132019					X			X		X	VOC analysis cancelled for 480-154934-1; sample recollected and reported as as Lab ID 480-157209-1
WC-21MS-08052019		X									

**Notes and Abbreviations**

1 - Analytical methods for the above analytes are presented in Table 16 - Summary of Analytical Methods.

2 - PFAS = Per- and Polyfluoroalkyl Substances, SIM = Selective Ion Monitoring, SVOCs = Semi-volatile Organic Compounds, TOC = Organic Carbon, PCBs = Polychlorinated Biphenyls.

**Table 4**  
**Monitoring Well Construction Details**  
**Former Oak Mitsui Fluorglas Division - Mechanic Street**

Monitoring Well Location	Date of Installation	Total Depth (ft bgs)	Ground Surface Elevation (ft amsl)	Reference Elevation (ft amsl)	Well Diameter (in)	Screen Slot Size (in)	Sand Pack Grain Size (mm)	Depth of Screened Interval		Elevation of Screened Interval		Outer Casing Depth (ft bgs)	Location	
								Top (ft bgs)	Bottom (ft bgs)	Top (ft amsl)	Bottom (ft amsl)		Northing	Easting
MS-MW-4	17-Oct-2000	31.0	429.00	428.64	2	0.01	Unknown	11.0	31.0	417.6	397.6	na	1484847.19	799590.85
MS-MW-5	17-Oct-2013	31.0	422.04	421.36	2	0.01	Unknown	11.0	31.0	410.4	390.4	na	1485363.02	799877.71
MS-MW-8	16-Oct-2013	30.0	423.84	423.55	2	0.01	#0	10.0	30.0	413.5	393.5	na	1485389.71	799708.26
MS-MW-008B	20-Mar-2019	56.0	423.51	422.87	2	0.01	#0	50.8	55.8	372.1	367.1	na	1485404.92	799692.01
MS-MW-009	17-Oct-2013	25.0	425.00	424.74	2	0.01	#0	7.0	27.0	417.7	397.7	na	1485276.48	799994.96
MS-MW-010	14-Mar-2019	8.0	428.33	427.91	2	0.01	#0	3.0	8.0	424.9	419.9	na	1484929.24	799557.74
MS-MW-011	14-Mar-2019	6.5	432.66	432.17	2	0.01	#0	3.5	6.5	428.7	425.7	na	1484864.40	799765.34
MS-MW-012	14-Mar-2019	15.0	432.60	432.26	2	0.01	#0	10.0	15.0	422.3	417.3	na	1484763.60	799940.61
MS-MW-013	18-Mar-2019	27.0	433.37	433.03	2	0.01	#0	17.0	27.0	416.0	406.0	na	1484834.43	800144.82
MS-MW-014	27-Mar-2019	38.5	430.23	429.98	2	0.01	#0	28.5	38.5	401.5	391.5	na	1485113.45	800121.02
MS-MW-015	30-Nov-2016	53.0	426.03	425.57	2	0.01	#0	43.0	53.0	382.6	372.6	na	1485267.35	800035.22
MS-MW-018	21-Mar-2019	26.0	421.19	420.74	2	0.01	#0	21.0	26.0	399.7	394.7	na	1485461.02	799749.59
MS-MW-019	19-Mar-2019	19.5	425.68	422.55	2	0.01	#0	9.5	19.5	413.1	403.1	na	1485693.45	799402.61

**Notes and Abbreviations**

ft = feet

in = inches

amsl = above mean sea level

mm = millimeters

bgs = below ground surface

na- Not Applicable

Wells constructed with 2-inch diameter polyvinyl chloride (PVC) screen and riser

Survey coordinates are in NAD83 State Plane New York East FIPS 3101 (US Feet).







**Table 6**  
**Analytical Results for PFOA and Other PFAS, pH and TOC: Groundwater Samples**  
**Former Oak Mitsui Fluorglas Division - Mechanic Street**



Parameter	Unit	NYDEC TOGS111 GA GUIDANCE	NYDEC TOGS111 GA STANDARD	Location ID	MS-MW-4	MS-MW-4	MS-MW-4	MS-MW-8	MS-MW-8	MS-MW-8	MS-MW-008B	MS-MW-9	MS-MW-010	MS-MW-011	MS-MW-014	MS-MW-015	MS-MW-015	MS-MW-018	MS-MW-019	
				Sample Date	11/18/2016	9/19/2018	4/24/2019	11/18/2016	11/18/2016	4/23/2019	4/23/2019	4/23/2019	4/23/2019	4/23/2019	4/23/2019	4/24/2019	4/24/2019	4/24/2019	4/24/2019	4/24/2019
				Sample Type	N	N	N	N	FD	N	N	N	N	N	N	FD	N	N	N	N
				Validated - Y/N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
<b>Per- and Polyfluoroalkyl Substances by USEPA Method 537 Modified</b>																				
NEtFOSAA	ng/l	NS	NS	na	na	1.8 U	na	na	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	2 U	1.8 U	
NMeFOSAA	ng/l	NS	NS	na	na	2.9 U	na	na	2.9 U	2.9 U	2.9 U	2.9 U	2.9 U	3 U	3 U	2.9 U	3 U	3.3 U	3 U	
Perfluorobutanesulfonic acid (PFBS)	ng/l	NS	NS	4 U	na	<b>1.7 J</b>	4 U	4 U	<b>0.69 J</b>	0.19 U	<b>0.36 J</b>	<b>1.6 J</b>	<b>1.9</b>	<b>1.9</b>	<b>1.2 J</b>	0.19 U	0.19 U	<b>0.57 J</b>	0.19 U	
Perfluorobutanoic Acid	ng/l	NS	NS	na	na	<b>7.6</b>	na	na	2.6 U	0.84 U	3.2 U	<b>19</b>	<b>15</b>	0.34 U	<b>28</b>	<b>28</b>	5.3 U	<b>7.2</b>		
Perfluorodecane Sulfonic Acid	ng/l	NS	NS	na	na	0.3 U	na	na	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.31 U	0.31 U	0.3 U	0.31 U	0.34 U	0.31 U	
Perfluorodecanoic acid (PFDA)	ng/l	NS	NS	1 U	na	0.29 U	1 U	1 U	<b>1.9</b>	0.29 U	0.29 U	<b>0.41 J</b>	<b>0.33 J</b>	0.3 U	0.29 U	0.3 U	0.33 U	0.3 U		
Perfluorododecanoic acid (PFDoA)	ng/l	NS	NS	3 U	na	0.52 U	3 U	3 U	0.52 U	0.51 U	0.51 U	0.52 U	0.53 U	0.53 U	0.52 U	0.53 U	0.58 U	0.53 U		
Perfluoroheptane Sulfonate (PFHPS)	ng/l	NS	NS	na	na	0.18 U	na	na	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	<b>0.25 J</b>	<b>0.26 J</b>	0.18 U	0.18 U	0.2 U	0.18 U	
Perfluoroheptanoic acid (PFHpA)	ng/l	NS	NS	<b>34 J</b>	na	<b>54</b>	<b>81</b>	<b>65</b>	<b>71</b>	0.23 U	<b>12</b>	<b>7.3</b>	<b>26</b>	<b>15</b>	0.24 U	0.24 U	<b>24</b>	<b>11</b>		
Perfluorohexanesulfonic acid (PFHxS)	ng/l	NS	NS	4 U	na	0.69 U	4 U	4 U	0.58 U	0.34 U	1.3 U	0.41 U	1.2 U	2.7 U	0.61 U	0.61 U	0.39 U	0.37 U		
Perfluorohexanoic acid (PFHxA)	ng/l	NS	NS	<b>32 J</b>	na	<b>38</b>	<b>44</b>	<b>36</b>	<b>35</b>	0.54 U	6 U	8.1 U	<b>24</b>	6.7 U	2.8 U	2.9 U	<b>21</b>	<b>21 J</b>		
Perfluorononanoic acid (PFNA)	ng/l	NS	NS	1 UJ	na	<b>0.96 J</b>	1 U	1 U	<b>1.9</b>	0.25 U	<b>1.2 J</b>	<b>1.8 J</b>	<b>3</b>	0.26 U	0.26 U	0.26 U	<b>0.48 J</b>	<b>0.34 J</b>		
Perfluorooctane Sulfonamide (FOSA)	ng/l	NS	NS	na	na	0.33 U	na	na	0.33 U	0.33 U	0.33 U	0.33 U	0.34 U	0.34 U	0.33 U	0.33 U	0.33 U	0.37 U	0.33 U	
Perfluorooctanesulfonic acid (PFOS)	ng/l	NS	NS	5 U	na	<b>1.8 J</b>	5 U	5 U	0.51 U	0.51 U	<b>6.3</b>	1.6 U	<b>8.7 J</b>	<b>7.9 J</b>	<b>0.67 J</b>	<b>1.2 J</b>	0.57 U	0.52 U		
Perfluorooctanoic acid (PFOA)	ng/l	NS	NS	<b>890</b>	na	<b>1800 J</b>	<b>2300</b>	<b>2000</b>	<b>2200 J</b>	0.79 U	<b>290</b>	<b>170</b>	<b>1000 J</b>	<b>380</b>	<b>56</b>	<b>54</b>	<b>770 J</b>	<b>140</b>		
Perfluoropentanoic Acid (PFPeA)	ng/l	NS	NS	na	na	<b>6</b>	na	na	<b>2.2</b>	0.46 U	<b>1.9</b>	<b>7.6</b>	<b>13</b>	0.47 U	0.47 U	0.47 U	<b>3.1</b>	<b>8.9</b>		
Perfluorotetradecanoic acid (PFTA)	ng/l	NS	NS	3 UJ	na	0.27 U	3 U	3 U	0.34 U	0.27 U	0.27 U	0.27 U	0.28 U	0.28 U	0.28 U	0.28 U	0.3 UJ	0.28 U		
Perfluorotridecanoic Acid (PFTriA)	ng/l	NS	NS	2 UJ	na	1.2 U	2 U	2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.3 U	1.2 U	1.2 U	1.2 U	1.4 U	1.2 U	
Perfluoroundecanoic Acid (PFUnA)	ng/l	NS	NS	2 UJ	na	1 U	2 U	2 U	1 U	1 U	1 U	1 U	1.1 U	1.1 U	1 U	1.1 U	1.1 U	1.2 U	1.1 U	
SODIUM 1H,1H,2H,2H-PERFLUORODECANE SULFONATE (8:2)	ng/l	NS	NS	na	na	1.9 U	na	na	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	2.1 U	1.9 U	
SODIUM 1H,1H,2H,2H-PERFLUOROOCCTANE SULFONATE (6:2)	ng/l	NS	NS	na	na	1.9 U	na	na	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	2.1 U	1.9 U	
<b>Total Organic Carbon by Lloyd Kahn Method</b>																				
Total Organic Carbon	mg/l	NS	NS	1.1	na	2.1	0.5 U	0.53 J	0.93 J	3.1	1.9	2.6	3.2	3.8	12.7	12.8	19.1	10.2		
<b>pH By Standard Method 9040</b>																				
pH	ph	NS	8.5	7.1	na	7.46	7.4	7.4	7.74	7.95	7.66	7.84	7.39	7.29	8.25	8.24	7.74	8.31		

**Notes and Abbreviations**

- ng/L - nanograms per liter
- U - Compound not detected
- J - Estimated value
- N - Primary sample
- FD - Field duplicate sample
- na - Sample not analyzed for this parameter
- Bold value indicates detected value



























Table 7

Analytical Results for Metals, Pesticides, PCBs, VOCs and SVOCs: Soil Samples
Former Oak Mitsui Fluorglas Division - Mechanic Street



Table with 19 columns for sample locations (MS-B-019A to MS-DB-004) and 20 rows for analytes (Metals, Mercury, Pesticides, PCBs). Columns include Analyte, Result Unit, Protection of Groundwater SCO, Commercial Use SCO, Industrial Use SCO, and 18 numerical data points.



























Table 7

**Analytical Results for Metals, Pesticides, PCBs, VOCs and SVOCs: Soil Samples**  
**Former Oak Mitsui Fluorglas Division - Mechanic Street**


Analyte	Result Unit	Protection of Groundwater SCO	Commercial Use SCO	Industrial Use SCO	Location ID	MS-SS-008	MS-SS-008	MS-SS-009	MS-SS-009	MS-SS-010	MS-SS-010	MS-SS-011	MS-SS-011
					Sample Date	04/03/2019	04/03/2019	04/03/2019	04/03/2019	04/03/2019	04/03/2019	04/03/2019	04/03/2019
					Sample Type	N	N	N	N	N	N	N	N
					Validated - Y/N	Y	Y	Y	Y	Y	Y	Y	Y
					Sample Depth	0.1-1 ft	0-0.1 ft	0.1-1 ft	0-0.1 ft	0.1-1 ft	0-0.1 ft	0.1-1 ft	0-0.1 ft
<b>Metals by USEPA Method 6010C</b>													
Aluminum	mg/kg	NS	NS	NS	11400 J	14200 J	9830 J	9950 J	10400 J	11600 J	9780 J	4020 J	
Antimony	mg/kg	NS	NS	NS	2.6 J	3.1 J	5.5 J	4.2 J	4.2 J	4.8 J	2.7 J	1.8 J	
Arsenic	mg/kg	16	16	16	10.2	13.9	15.9	15.1	12.1	12.4	7.9	5.4	
Barium	mg/kg	820	400	10000	99.5 J	141 J	65.6 J	84.8 J	187 J	195 J	78.8 J	93.2 J	
Beryllium	mg/kg	47	590	2700	0.58	0.73	0.47	0.51	0.67	0.65	0.5	0.32 J	
Cadmium	mg/kg	7.5	9.3	60	0.43	0.41	0.5	0.51	0.68	0.57	0.17 J	0.54	
Calcium	mg/kg	NS	NS	NS	3090 J	5120 J	1880 J	5360 J	11200 J	12700 J	4050 J	15400 J	
Chromium, Total	mg/kg	NS	1500	6800	17.9	18.2	16.4	16.2	17	17.2	13.3	11.6	
Cobalt	mg/kg	NS	NS	NS	9.8	11.6	9.2	8.7	9.4	8.9	9.8	3.8	
Copper	mg/kg	1720	270	10000	147 J	96.1 J	6310 J	154 J	107 J	108 J	59.5 J	46.7 J	
Iron	mg/kg	NS	NS	NS	25100	28800	35600	32100	31400	35700	24100	10500	
Lead	mg/kg	450	1000	3900	104 J	150 J	125 J	148 J	155 J	143 J	32.4 J	28.6 J	
Magnesium	mg/kg	NS	NS	NS	3930 J	4330 J	2450 J	2810 J	3830 J	5270 J	3820 J	1950 J	
Manganese	mg/kg	2000	10000	10000	772	943	600	620	1090	1170	749	462	
Nickel	mg/kg	130	310	10000	21.4	24.5	20.6	19.3	23.7	25.7	19.9	9.4 J	
Potassium	mg/kg	NS	NS	NS	2050 J	2510 J	1510 J	1750 J	2110 J	1940 J	1390 J	1070 J	
Selenium	mg/kg	4	1500	6800	5.3 U	6.1 U	0.49 J	0.83 J	9 U	9.7 U	0.59 J	9.8 U	
Silver	mg/kg	8.3	1500	6800	0.8 U	0.92 U	0.71 U	1.1 U	1.4 U	1.5 U	0.74 U	1.5 U	
Sodium	mg/kg	NS	NS	NS	55.9 J	65.6 J	88 J	74.9 J	90 J	66.6 J	51.8 J	56 J	
Thallium	mg/kg	NS	NS	NS	8 U	9.2 U	7.1 U	10.6 U	13.5 U	14.5 U	7.4 U	14.7 U	
Vanadium	mg/kg	NS	NS	NS	30.5	34.4	37	40.1	34.8	33.5	20.8	11.8	
Zinc	mg/kg	2480	10000	10000	295	255	402	304	233	236	103	151	
<b>Mercury by USEPA Method SW7471B</b>													
Mercury	mg/kg	0.73	2.8	5.7	0.12	0.18	0.11	0.22	0.23	0.21	0.059	0.097	
<b>Pesticides by USEPA Method 8081B</b>													
Aldrin	ug/kg	190	680	1400	22 U	25 U	1.9 U	2.9 U	19 U	40 U	2 U	4 U	
Alpha Bhc (Alpha Hexachlorocyclohexane)	ug/kg	20	3400	6800	22 U	25 U	1.9 U	2.9 U	19 U	40 U	2 U	4 U	
Alpha Endosulfan	ug/kg	102000	200000	920000	22 U	25 U	1.9 U	2.9 U	19 U	40 U	2 U	4 U	
Beta Bhc (Beta Hexachlorocyclohexane)	ug/kg	90	3000	14000	22 U	25 U	1.9 U	2.9 U	19 U	40 U	4.6	4 U	
Beta Endosulfan	ug/kg	102000	200000	920000	22 U	25 U	1.9 U	2.9 U	19 U	40 U	2 U	4 U	
cis-Chlordane	ug/kg	2900	24000	47000	22 U	25 U	1.9 U	2.9 U	19 U	40 U	2 U	4 U	
Delta BHC (Delta Hexachlorocyclohexane)	ug/kg	250	500000	1000000	22 U	25 U	1.9 U	2.9 U	19 U	40 U	2 U	4 U	
Dieldrin	ug/kg	100	1400	2800	22 U	25 U	1.9 U	2.9 U	19 U	40 U	2 U	3.3 J	
Endosulfan Sulfate	ug/kg	1000000	200000	920000	22 U	25 U	1.9 U	2.9 U	19 U	40 U	2 U	4 U	
Endrin	ug/kg	60	89000	410000	22 U	25 U	1.9 U	2.9 U	19 U	40 U	2 U	4 U	
Endrin Aldehyde	ug/kg	NS	NS	NS	22 U	25 U	1.9 U	2.9 U	19 U	40 U	2 U	4 U	
Endrin Ketone	ug/kg	NS	NS	NS	22 U	25 U	1.9 U	2.9 U	19 U	40 U	2 U	4 U	
Gamma Bhc (Lindane)	ug/kg	100	9200	23000	22 U	25 U	1.9 U	2.9 U	19 U	40 U	2 U	4 U	
Heptachlor	ug/kg	380	15000	29000	22 U	25 U	1.9 U	2.9 U	19 U	40 U	2 U	4 U	
Heptachlor Epoxide	ug/kg	NS	NS	NS	22 U	25 U	1.9 U	2.9 U	19 U	40 U	2 U	4 U	
Methoxychlor	ug/kg	NS	NS	NS	10 J	7.5 J	1.9 U	2.9 U	8.9 J	16 J	2 U	4 U	
P,P'-DDD	ug/kg	14000	92000	180000	8.6 J	8.6 J	0.61 J	0.68 J	9.4 J	15 J	2 U	1.8 J	
P,P'-DDE	ug/kg	17000	62000	120000	10 J	12 J	1 J	2.9 U	9.4 J	19 J	2 U	4 U	
P,P'-DDT	ug/kg	136000	47000	94000	13 J	14 J	0.84 J	2.9 U	16 J	23 J	0.65 J	4 U	
Toxaphene	ug/kg	NS	NS	NS	220 U	250 U	19 U	29 U	190 U	400 U	20 U	40 U	
trans-Chlordane	ug/kg	NS	NS	NS	22 U	25 U	1.9 U	2.9 U	19 U	40 U	2 U	4 U	
<b>Polychlorinated Biphenyls (PCBs) by USEPA Method 8082A</b>													
PCB-1016 (Aroclor 1016)	mg/kg	3.2	1	25	0.3 U	0.36 U	0.27 U	0.4 U	0.49 U	0.55 U	0.26 U	0.57 U	
PCB-1221 (Aroclor 1221)	mg/kg	3.2	1	25	0.3 U	0.36 U	0.27 U	0.4 U	0.49 U	0.55 U	0.26 U	0.57 U	
PCB-1232 (Aroclor 1232)	mg/kg	3.2	1	25	0.3 U	0.36 U	0.27 U	0.4 U	0.49 U	0.55 U	0.26 U	0.57 U	
PCB-1242 (Aroclor 1242)	mg/kg	3.2	1	25	0.3 U	0.36 U	0.27 U	0.4 U	0.49 U	0.55 U	0.26 U	0.57 U	
PCB-1248 (Aroclor 1248)	mg/kg	3.2	1	25	0.3 U	0.36 U	0.27 U	0.4 U	0.49 U	0.55 U	0.26 U	0.57 U	
PCB-1254 (Aroclor 1254)	mg/kg	3.2	1	25	0.3 U	0.36 U	0.27 U	0.4 U	0.49 U	0.55 U	0.26 U	0.57 U	
PCB-1260 (Aroclor 1260)	mg/kg	3.2	1	25	0.3 U	0.36 U	0.27 U	0.4 U	0.49 U	0.55 U	0.26 U	0.57 U	

Table 7

Analytical Results for Metals, Pesticides, PCBs, VOCs and SVOCs: Soil Samples  
Former Oak Mitsui Fluorglas Division - Mechanic Street



Analyte	Result Unit	Protection of Groundwater SCO	Commercial Use SCO	Industrial Use SCO	Location ID	MS-SS-008	MS-SS-008	MS-SS-009	MS-SS-009	MS-SS-010	MS-SS-010	MS-SS-011	MS-SS-011
					Sample Date	04/03/2019	04/03/2019	04/03/2019	04/03/2019	04/03/2019	04/03/2019	04/03/2019	04/03/2019
					Sample Type	N	N	N	N	N	N	N	N
					Validated - Y/N	Y	Y	Y	Y	Y	Y	Y	Y
					Sample Depth	0.1-1 ft	0-0.1 ft	0.1-1 ft	0-0.1 ft	0.1-1 ft	0-0.1 ft	0.1-1 ft	0-0.1 ft
<b>Volatile Organic Compounds (VOCs) by USEPA Method 8260C</b>													
1,1,1-Trichloroethane (TCA)	ug/kg	680	500000	1000000	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
1,1,2,2-Tetrachloroethane	ug/kg	NS	NS	NS	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ug/kg	NS	NS	NS	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
1,1,2-Trichloroethane	ug/kg	NS	NS	NS	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
1,1-Dichloroethane	ug/kg	270	240000	480000	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
1,1-Dichloroethene	ug/kg	330	500000	1000000	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
1,2,4-Trichlorobenzene	ug/kg	NS	NS	NS	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
1,2,4-Trimethylbenzene	ug/kg	3600	190000	380000	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
1,2-Dibromo-3-Chloropropane	ug/kg	NS	NS	NS	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
1,2-Dibromoethane (Ethylene Dibromide)	ug/kg	NS	NS	NS	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
1,2-Dichlorobenzene	ug/kg	1100	500000	1000000	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
1,2-Dichloroethane	ug/kg	20	30000	60000	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
1,2-Dichloropropane	ug/kg	NS	NS	NS	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
1,3,5-Trimethylbenzene (Mesitylene)	ug/kg	8400	190000	380000	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
1,3-Dichlorobenzene	ug/kg	2400	280000	560000	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
1,4-Dichlorobenzene	ug/kg	1800	130000	250000	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
2-Hexanone	ug/kg	NS	NS	NS	29 U	29 U	24 U	89 UJ	54 U	55 U	28 U	59 U	
Acetone	ug/kg	50	500000	1000000	9.4 J	10 J	54	250 J	38 J	17 J	28	27 J	
Benzene	ug/kg	60	44000	89000	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
Bromodichloromethane	ug/kg	NS	NS	NS	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
Bromoform	ug/kg	NS	NS	NS	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
Bromomethane	ug/kg	NS	NS	NS	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
Carbon Disulfide	ug/kg	NS	NS	NS	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
Carbon Tetrachloride	ug/kg	760	22000	44000	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
Chlorobenzene	ug/kg	1100	500000	1000000	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
Chloroethane	ug/kg	NS	NS	NS	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
Chloroform	ug/kg	370	350000	700000	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
Chloromethane	ug/kg	NS	NS	NS	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
Cis-1,2-Dichloroethylene	ug/kg	250	500000	1000000	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
Cis-1,3-Dichloropropene	ug/kg	NS	NS	NS	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
Cyclohexane	ug/kg	NS	NS	NS	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
Cymene	ug/kg	NS	NS	NS	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
Dibromochloromethane	ug/kg	NS	NS	NS	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
Dichlorodifluoromethane	ug/kg	NS	NS	NS	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
Ethylbenzene	ug/kg	1000	390000	780000	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
Isopropylbenzene (Cumene)	ug/kg	NS	NS	NS	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
Methyl Acetate	ug/kg	NS	NS	NS	29 U	29 U	24 U	89 UJ	54 U	55 U	28 U	59 U	
Methyl Ethyl Ketone (2-Butanone)	ug/kg	120	500000	1000000	29 U	29 U	24 U	18 J	54 U	55 U	28 U	59 U	
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	ug/kg	NS	NS	NS	29 U	29 U	24 U	89 UJ	54 U	55 U	28 U	59 U	
Methylcyclohexane	ug/kg	NS	NS	NS	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
Methylene Chloride	ug/kg	50	500000	1000000	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
Naphthalene	ug/kg	12000	500000	1000000	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
N-Butylbenzene	ug/kg	12000	500000	1000000	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
N-Propylbenzene	ug/kg	3900	500000	1000000	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
Sec-Butylbenzene	ug/kg	11000	500000	1000000	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
Styrene	ug/kg	NS	NS	NS	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
T-Butylbenzene	ug/kg	5900	500000	1000000	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
Tert-Butyl Methyl Ether	ug/kg	930	500000	1000000	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
Tetrachloroethylene (PCE)	ug/kg	1300	150000	300000	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
Toluene	ug/kg	700	500000	1000000	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
Trans-1,2-Dichloroethene	ug/kg	190	500000	1000000	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
Trans-1,3-Dichloropropene	ug/kg	NS	NS	NS	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
Trichloroethylene (TCE)	ug/kg	470	200000	400000	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
Trichlorofluoromethane	ug/kg	NS	NS	NS	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
Vinyl Chloride	ug/kg	20	13000	27000	5.8 U	5.7 U	4.9 U	18 UJ	11 U	11 U	5.6 U	12 U	
Xylenes, Total	ug/kg	NS	NS	NS	12 U	11 U	9.7 U	36 UJ	21 U	22 U	11 U	23 U	



Table 7

**Analytical Results for Metals, Pesticides, PCBs, VOCs and SVOCs: Soil Samples**  
**Former Oak Mitsui Fluorglas Division - Mechanic Street**

					Location ID	MS-SS-008	MS-SS-008	MS-SS-009	MS-SS-009	MS-SS-010	MS-SS-010	MS-SS-011	MS-SS-011
					Sample Date	04/03/2019	04/03/2019	04/03/2019	04/03/2019	04/03/2019	04/03/2019	04/03/2019	04/03/2019
					Sample Type	N	N	N	N	N	N	N	N
					Validated - Y/N	Y	Y	Y	Y	Y	Y	Y	Y
					Sample Depth	0.1-1 ft	0-0.1 ft	0.1-1 ft	0-0.1 ft	0.1-1 ft	0-0.1 ft	0.1-1 ft	0-0.1 ft
Analyte	Result Unit	Protection of Groundwater SCO	Commercial Use SCO	Industrial Use SCO									
<b>Semivolatile Organic Compounds (SVOCs) by USEPA Method 8270D</b>													
1,4-Dioxane (P-Dioxane)	ug/kg	100	130000	250000	1300 U	1500 U	230 U	1700 U	2200 U	2400 U	250 U	490 U	
2,4,5-Trichlorophenol	ug/kg	NS	NS	NS	1100 U	1300 U	200 U	1500 U	1900 U	2000 U	210 U	410 U	
2,4,6-Trichlorophenol	ug/kg	NS	NS	NS	1100 U	1300 U	200 U	1500 U	1900 U	2000 U	210 U	410 U	
2,4-Dichlorophenol	ug/kg	NS	NS	NS	1100 U	1300 U	200 U	1500 U	1900 U	2000 U	210 U	410 U	
2,4-Dimethylphenol	ug/kg	NS	NS	NS	1100 U	1300 U	200 U	1500 U	1900 U	2000 U	210 U	410 U	
2,4-Dinitrophenol	ug/kg	NS	NS	NS	11000 U	12000 U	2000 U	14000 U	18000 U	20000 U	2100 U	4000 U	
2,4-Dinitrotoluene	ug/kg	NS	NS	NS	1100 U	1300 U	200 U	1500 U	1900 U	2000 U	210 U	410 U	
2,6-Dinitrotoluene	ug/kg	NS	NS	NS	1100 U	1300 U	200 U	1500 U	1900 U	2000 U	210 U	410 U	
2-Chloronaphthalene	ug/kg	NS	NS	NS	1100 U	1300 U	200 U	1500 U	1900 U	2000 U	210 U	410 U	
2-Chlorophenol	ug/kg	NS	NS	NS	1100 U	1300 U	200 U	1500 U	1900 U	2000 U	210 U	410 U	
2-Methylnaphthalene	ug/kg	NS	NS	NS	1100 U	1300 U	200 U	1500 U	1900 U	2000 U	210 U	410 U	
2-Methylphenol (O-Cresol)	ug/kg	330	500000	1000000	1100 U	1300 U	200 U	1500 U	1900 U	2000 U	210 U	410 U	
2-Nitroaniline	ug/kg	NS	NS	NS	2100 U	2500 U	390 U	2900 U	3600 U	3900 U	410 U	800 U	
2-Nitrophenol	ug/kg	NS	NS	NS	1100 U	1300 U	200 U	1500 U	1900 U	2000 U	210 U	410 U	
3,3'-Dichlorobenzidine	ug/kg	NS	NS	NS	2100 U	2500 U	390 U	2900 U	3600 U	3900 U	410 U	800 U	
3-Nitroaniline	ug/kg	NS	NS	NS	2100 U	2500 U	390 U	2900 U	3600 U	3900 U	410 U	800 U	
4,6-Dinitro-2-Methylphenol	ug/kg	NS	NS	NS	2100 U	2500 U	390 U	2900 U	3600 U	3900 U	410 U	800 U	
4-Bromophenyl Phenyl Ether	ug/kg	NS	NS	NS	1100 U	1300 U	200 U	1500 U	1900 U	2000 U	210 U	410 U	
4-Chloro-3-Methylphenol	ug/kg	NS	NS	NS	1100 U	1300 U	200 U	1500 U	1900 U	2000 U	210 U	410 U	
4-Chloroaniline	ug/kg	NS	NS	NS	1100 U	1300 U	200 U	1500 U	1900 U	2000 U	210 U	410 U	
4-Chlorophenyl Phenyl Ether	ug/kg	NS	NS	NS	1100 U	1300 U	200 U	1500 U	1900 U	2000 U	210 U	410 U	
4-Methylphenol (P-Cresol)	ug/kg	330	500000	1000000	2100 U	2500 U	390 U	2900 U	3600 U	3900 U	410 U	800 U	
4-Nitroaniline	ug/kg	NS	NS	NS	2100 U	2500 U	390 U	2900 U	3600 U	3900 U	410 U	800 U	
4-Nitrophenol	ug/kg	NS	NS	NS	2100 U	2500 U	390 U	2900 U	3600 U	3900 U	410 U	800 U	
Acenaphthene	ug/kg	98000	500000	1000000	590 J	1600	200 U	1500 U	1300 J	1300 J	210 U	410 U	
Acenaphthylene	ug/kg	1070000	500000	1000000	420 J	600 J	200 U	1500 U	1000 J	1000 J	210 U	410 U	
Acetophenone	ug/kg	NS	NS	NS	1100 U	1300 U	200 U	1500 U	1900 U	2000 U	210 U	410 U	
Anthracene	ug/kg	1000000	500000	1000000	2200	3100	200 U	1500 U	3900	4100	210 U	410 U	
Atrazine	ug/kg	NS	NS	NS	1100 U	1300 U	200 U	1500 U	1900 U	2000 U	210 U	410 U	
Benzaldehyde	ug/kg	NS	NS	NS	1100 U	1300 U	200 U	1500 U	1900 U	2000 U	210 U	410 U	
Benzo(A)Anthracene	ug/kg	1000	5600	11000	8100	10000	130 J	1500 U	14000	16000	210 U	410 U	
Benzo(A)Pyrene	ug/kg	22000	1000	1100	6100	8100	130 J	1500 U	10000	12000	74 J	190 J	
Benzo(B)Fluoranthene	ug/kg	1700	5600	11000	7200	10000	170 J	1500 U	13000	14000	210 U	280 J	
Benzo(G,H,I)Perylene	ug/kg	1000000	500000	1000000	4100	5700	120 J	1500 U	7100	8100	210 U	410 U	
Benzo(K)Fluoranthene	ug/kg	1700	56000	110000	4100	4200	75 J	1500 U	5800	7200	210 U	120 J	
Benzyl Butyl Phthalate	ug/kg	NS	NS	NS	1100 U	1300 U	200 U	1500 U	1900 U	2000 U	210 U	410 U	
Biphenyl (Diphenyl)	ug/kg	NS	NS	NS	1100 U	1300 U	200 U	1500 U	1900 U	2000 U	210 U	410 U	
Bis(2-Chloroethoxy) Methane	ug/kg	NS	NS	NS	1100 U	1300 U	200 U	1500 U	1900 U	2000 U	210 U	410 U	
Bis(2-Chloroethyl) Ether (2-Chloroethyl Ether)	ug/kg	NS	NS	NS	1100 U	1300 U	200 U	1500 U	1900 U	2000 U	210 U	410 U	
Bis(2-Chloroisopropyl) Ether	ug/kg	NS	NS	NS	1100 U	1300 U	200 U	1500 U	1900 U	2000 U	210 U	410 U	
Bis(2-Ethylhexyl) Phthalate	ug/kg	NS	NS	NS	1100 U	1300 U	200 U	1500 U	1900 U	2000 U	210 U	410 U	
Caprolactam	ug/kg	NS	NS	NS	1100 U	1300 U	200 U	1500 U	1900 U	2000 U	210 U	410 U	
Carbazole	ug/kg	NS	NS	NS	1400	2000	200 U	1500 U	2100	2100	210 U	410 U	
Chrysene	ug/kg	1000	56000	110000	8100	11000	180 J	1500 U	13000	15000	97 J	410 U	
Dibenz(A,H)Anthracene	ug/kg	1000000	560	1100	1100 U	1300 U	200 U	1500 U	1900 U	2500	210 U	410 U	
Dibenzofuran	ug/kg	210000	350000	1000000	600 J	1400	200 U	1500 U	1100 J	1200 J	210 U	410 U	
Diethyl Phthalate	ug/kg	NS	NS	NS	1100 U	1300 U	200 U	1500 U	1900 U	2000 U	210 U	410 U	
Dimethyl Phthalate	ug/kg	NS	NS	NS	1100 U	1300 U	200 U	1500 U	1900 U	2000 U	210 U	410 U	
Di-N-Butyl Phthalate	ug/kg	NS	NS	NS	1100 U	1300 U	200 U	1500 U	1900 U	2000 U	210 U	410 U	
Di-N-Octylphthalate	ug/kg	NS	NS	NS	1100 U	1300 U	200 U	1500 U	1900 U	2000 U	210 U	410 U	
Fluoranthene	ug/kg	1000000	500000	1000000	16000	21000	280	510 J	28000	28000	170 J	500	
Fluorene	ug/kg	386000	500000	1000000	750 J	1400	200 U	1500 U	1300 J	1400 J	210 U	410 U	
Hexachlorobenzene	ug/kg	3200	6000	12000	1100 U	1300 U	200 U	1500 U	1900 U	2000 U	210 U	410 U	
Hexachlorobutadiene	ug/kg	NS	NS	NS	1100 U	1300 U	200 U	1500 U	1900 U	2000 U	210 U	410 U	
Hexachlorocyclopentadiene	ug/kg	NS	NS	NS	1100 U	1300 U	200 U	1500 U	1900 U	2000 U	210 U	410 U	
Hexachloroethane	ug/kg	NS	NS	NS	1100 U	1300 U	200 U	1500 U	1900 U	2000 U	210 U	410 U	
Indeno(1,2,3-C,D)Pyrene	ug/kg	8200	5600	11000	3800	4600	94 J	1500 U	6300	7200	210 U	160 J	
Isophorone	ug/kg	NS	NS	NS	1100 U	1300 U	200 U	1500 U	1900 U	2000 U	210 U	410 U	
Naphthalene	ug/kg	12000	500000	1000000	1100 U	790 J	200 U	1500 U	1900 U	420 J	210 U	410 U	
Nitrobenzene	ug/kg	NS	NS	NS	1100 U	1300 U	200 U	1500 U	1900 U	2000 U	210 U	410 U	
N-Nitrosodi-N-Propylamine	ug/kg	NS	NS	NS	1100 U	1300 U	200 U	1500 U	1900 U	2000 U	210 U	410 U	
N-Nitrosodiphenylamine	ug/kg	NS	NS	NS	1100 U	1300 U	200 U	1500 U	1900 U	2000 U	210 U	410 U	
Pentachlorophenol	ug/kg	800	6700	55000	2100 U	2500 U	390 U	2900 U	3600 U	3900 U	410 U	800 U	
Phenanthrene	ug/kg	1000000	500000	1000000	12000	20000	200	1500 U	21000	19000	64 J	220 J	
Phenol	ug/kg	330	500000	1000000	1100 U	1300 U	200 U	1500 U	1900 U	2000 U	210 U	410 U	
Pyrene	ug/kg	1000000	500000	1000000	15000	20000	320	510 J	24000	27000	140 J	430	
<b>Cyanide by USEPA Method SW9012</b>													
Cyanide	mg/kg	40	27	10000	1.1 U	1.3 U	1.2 U	1.7 UJ	2 U	1.5 J	1.2 U	2.2 U	
<b>General Chemistry</b>													
Temperature	deg c	NS	NS	NS	na	na	na	na	na	na	na	na	

**Notes and Abbreviations**  
ug/kg - micrograms per kilogram  
mg/kg - milligrams per kilogram  
U - Compound not detected  
J - Estimated value  
N - Primary sample  
FD - Field duplicate sample  
na - Sample not analyzed for this parameter  
NS - No standard









**Table 9**  
**Summary of Analytical Methods**  
**Mechanic Street Site**

Analytical Parameter	Matrix	Method Number	Method Title	Method Reference
PFAS	Aqueous/Non-Aqueous	537 (modified)	Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS) Version 1.1	1
VOCs	Aqueous/Non-Aqueous	8260C	Volatile Organic Compounds by Gas Chromatography/ Mass Spectrometry	2
SVOCs	Aqueous/Non-Aqueous	8270D	Semivolatile Organic Compounds by Gas Chromatography/ Mass Spectrometry	2
Pesticides	Aqueous/Non-Aqueous	8081B	Organochlorine Pesticides by Gas Chromatography	2
PCBs	Aqueous/Non-Aqueous	8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	2
Metals	Aqueous/Non-Aqueous	6010C	Inductively Coupled Plasma-Optical Emission Spectrometry (ICP-AES)	2
Mercury	Aqueous	7470A	Mercury in Liquid Waste (Manual Cold-Vapor Technique)	2
Mercury	Non-Aqueous	7471B	Mercury in Solid or Semisolid Waste (Manual Cold-Vapor Technique)	2
Cyanide	Aqueous/Non-Aqueous	9012B	Total and Amenable Cyanide (Automated Colorimetric, With Off-Line Distillation)	2
TOC	Non-Aqueous	Lloyd Kahn (modified)	Determination of Total Organic Carbon in Sediment (Lloyd Kahn Method) July 27, 1988	3
TOC	Aqueous	9060A	Total Organic Carbon by Carbonaceous Analyzer	2
pH	Non-Aqueous	9045D	Soil and Waste pH	2
pH	Aqueous	9040C	pH Electrometric Measurement	2

**Notes and Abbreviations**

- 1 - Methods for the Determination of Organic Compounds in Drinking Water – Supplement III
- 2 - USEPA Test Methods for Evaluating Solid Waste: Physical/Chemical Methods (SW-846)
- 3 - EPA Region II Document Determination of Total Organic Carbon in Sediment, July 27, 1988.

PFAS - Per- and Polyfluoroalkyl Substances  
 VOCs - Volatile Organic Compounds  
 SVOCs - Semivolatile Organic Compounds  
 Pesticides - Pesticide Organic Compounds  
 PCBs - Polychlorinated Biphenyl Compounds  
 TOC - Total Organic Carbon

**Table 10**  
**Investigative Derived Wastes**  
**Mechanic Street Site**

Drum Number	Contents	Accumulation Start Date	Waste Pickup Date	Waste Classification	Heritage WS No.	Manifest No.
<b>Mechanic Street</b>						
Frac Tank	Decon/Drilling/Well Develop/Purge Waters	43539	43733	Non-Hazardous	207632-1	3085033-15119
1	Drill Cuttings	43543	43721	Non-Hazardous	207632-2	3074832-15119
2	Drill Cuttings	43538	43721	Non-Hazardous	207632-2	3074832-15119
3	PPE & Sampling Materials	43538	43721	Non-Hazardous	207632-2	3074832-15119
4	Drill Cuttings	43539	43721	Non-Hazardous	207632-2	3074832-15119
5	Drill Cuttings	43539	43721	Non-Hazardous	207632-2	3074832-15119
6	Drill Cuttings and Fluid	43539	43721	Non-Hazardous	207632-2	3074832-15119
7	Drill Cuttings	43538	43721	Non-Hazardous	207632-2	3074832-15119
8	Drill Cuttings	43542	43721	Non-Hazardous	207632-2	3074832-15119
9	Drill Cuttings	43543	43721	Non-Hazardous	207632-2	3074832-15119
10	Drill Cuttings	43543	43721	Non-Hazardous	207632-2	3074832-15119
11	Drill Cuttings	43542	43721	Non-Hazardous	207632-2	3074832-15119
12	Drill Cuttings	43545	43721	Non-Hazardous	207632-2	3074832-15119
13	Drill Cuttings	43546	43721	Non-Hazardous	207632-2	3074832-15119
14	Drill Cuttings	43549	43721	Non-Hazardous	207632-2	3074832-15119
15	Drill Cuttings	43550	43721	Non-Hazardous	207632-2	3074832-15119
16	Drill Cuttings & Sludge	43549	43721	Non-Hazardous	207632-2	3074832-15119
17	Drill Cuttings & Sludge	43550	43721	Non-Hazardous	207632-2	3074832-15119
18	Drill Cuttings	43550	43721	Non-Hazardous	207632-2	3074832-15119
19	Drill Cuttings & Sludge	43550	43721	Non-Hazardous	207632-2	3074832-15119
20	Drill Water Sludge & Asphalt	43550	43721	Non-Hazardous	207632-2	3074832-15119
21	PPE, Rig Liner	43553	43721	Non-Hazardous	207632-2	3074832-15119
22	PPE-Purge Tubing	43557	43721	Non-Hazardous	207632-2	3074832-15119
23	PPE, Tubing	43557	43721	Non-Hazardous	207632-2	3074832-15119
24	Purge Water	43557	43733	Non-Hazardous	207632-1	3085033-15119
25	Decon Pad Liner	43558	43721	Non-Hazardous	207632-2	3074832-15119
26	Frac Tank Bottoms	43733	43790	Non-Hazardous	207632-3	3113591-15119
27	Frac Tank Bottoms	43733	43790	Non-Hazardous	207632-3	3113591-15119
28	Frac Tank Bottoms	43733	43790	Non-Hazardous	207632-3	3113591-15119
29	Frac Tank Bottoms	43733	43790	Non-Hazardous	207632-3	3113591-15119
30	Frac Tank Bottoms	43733	43790	Non-Hazardous	207632-3	3113591-15119
31	Frac Tank Bottoms	43733	43790	Non-Hazardous	207632-3	3113591-15119
32	Frac Tank Bottoms	43733	43790	Non-Hazardous	207632-3	3113591-15119
33	Frac Tank Bottoms	43733	43790	Non-Hazardous	207632-3	3113591-15119
34	Frac Tank Bottoms	43733	43790	Non-Hazardous	207632-3	3113591-15119
35	Frac Tank Bottoms	43733	43790	Non-Hazardous	207632-2	3155795-15119

- Notes:**
- a) Water investigative derived waste (IDW) consists of a combination of decontamination water, monitoring well development water and purged groundwater from Advanced Profiling System (APS) and monitoring well sampling activities.
  - b) Personal Protective Equipment (PPE) IDW consists of nitrile gloves, high-density polyethylene (HDPE) bags for soil sampling, soil acetate liners, paper towels, HDPE tubing and/or soil sampling materials (i.e., items which came in contact with soil or groundwater).

## **APPENDICES**

- A**            **SC Geophysical Report**
- B**            **Soil Boring and Well Construction Logs**
- C**            **SC Groundwater Monitoring Well Development and Sampling Records**

## **APPENDIX A      SC Geophysical Report**

**Date(s) on site:** 7-16-19

**Technician:** Steve Carney

**Other Technicians on site:**

**Customer:** ERM Consulting & Engineering, Inc.

**Site Address:** 1 Mechanic St, Hoosick Falls, NY

**Contact Person:** Brian Neumann

**Phone:** 518-441-1520

**Scope of Work:** Utility Location Services -- Search for potential UST

**Type of Service:** *mark all that apply*

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> Leak Detection            | <input type="checkbox"/> Comprehensive Leak Survey       | <input type="checkbox"/> Pressurized Pipe Inspection |
| <input type="checkbox"/> Infrastructure Assessment | <input checked="" type="checkbox"/> Utility Location/GPR | <input type="checkbox"/> Utility Mapping/AutoCAD     |
| <input type="checkbox"/> EM Survey                 | <input type="checkbox"/> Video Inspection                | <input type="checkbox"/> Valve Exercising            |

---

**Type of Equipment Used:**

*mark all that apply*

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Profiler EMP 400                    | <input checked="" type="checkbox"/> RD8000 Pipe & Cable Locator | <input type="checkbox"/> MetroTech vLocPro2                 |
| <input type="checkbox"/> LC2500 Leak Correlator              | <input checked="" type="checkbox"/> Noggin 250 MHz              | <input type="checkbox"/> PosiTector UTG G3                  |
| <input type="checkbox"/> S-30 Surveyor                       | <input type="checkbox"/> Noggin 500 MHz                         | <input checked="" type="checkbox"/> Video Inspection Camera |
| <input checked="" type="checkbox"/> Sonde / Locatable Rodder | <input type="checkbox"/> Conquest 1000 MHz                      | <input type="checkbox"/> Helium #      Bottles              |
| <input type="checkbox"/> Leica Robotic Total Station         | <input type="checkbox"/> Leica RTK GPS                          | <input type="checkbox"/> JD7 Investigator                   |
| <input type="checkbox"/> Valve Maintenance Trailer           | <input type="checkbox"/> Thermal Imaging Camera                 | <input type="checkbox"/> ZCorr Data Loggers                 |

**Marking Used:** *mark all that apply*

- |   |   |                                       |
|---|---|---------------------------------------|
| <input checked="" type="checkbox"/> Paint | <input checked="" type="checkbox"/> Flags       | <input type="checkbox"/> Chalk/Marker |
| <input type="checkbox"/> Tape             | <input type="checkbox"/> Updated Onsite Mapping | <input type="checkbox"/> Other _____  |

**Site Access/Safety Training:** N/A

**Expiration Date:** N/A

**Ground Cover/Weather Conditions:** Clear / 80's

**Instructions from Onsite Contact:** Utility Location Services – Locate potential UST's and various utility locates

**Information Transfer:**

In addition to this field report, mark all that apply:

Information relayed on site to:

Hand drawn sketch

Maps updated onsite

Cal / Dave

Photographs

Surveyed by others

Surveyed and AutoCAD Mapping by NYLD

**Notes/Testing Results:**

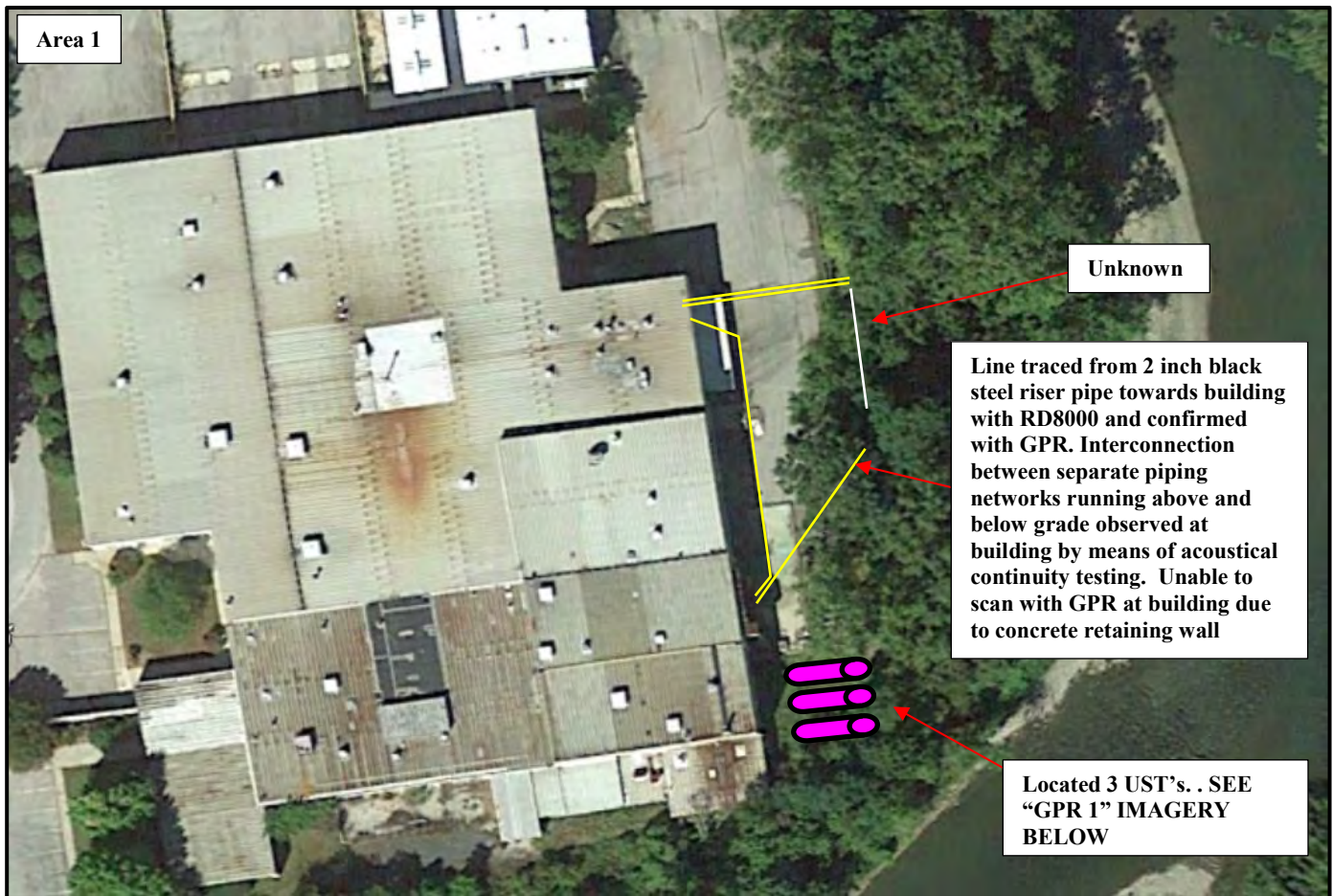
A visual inspection was performed in the area of concern to assess for utility structures. Utilizing the RD8000 in conductive, inductive, and power/radio modes, located and marked out utilities as shown in the area below. Sonde/Locatable Rodder was used within applicable utilities. Additional confirmation performed with the Noggin using the 250 and/or 500 MHz antenna. GPR signal reception varies depending upon soil conditions. Therefore, it is utilized in combination with various other geophysical tools for the most accurate verification of known/unknown utilities and/or structures.

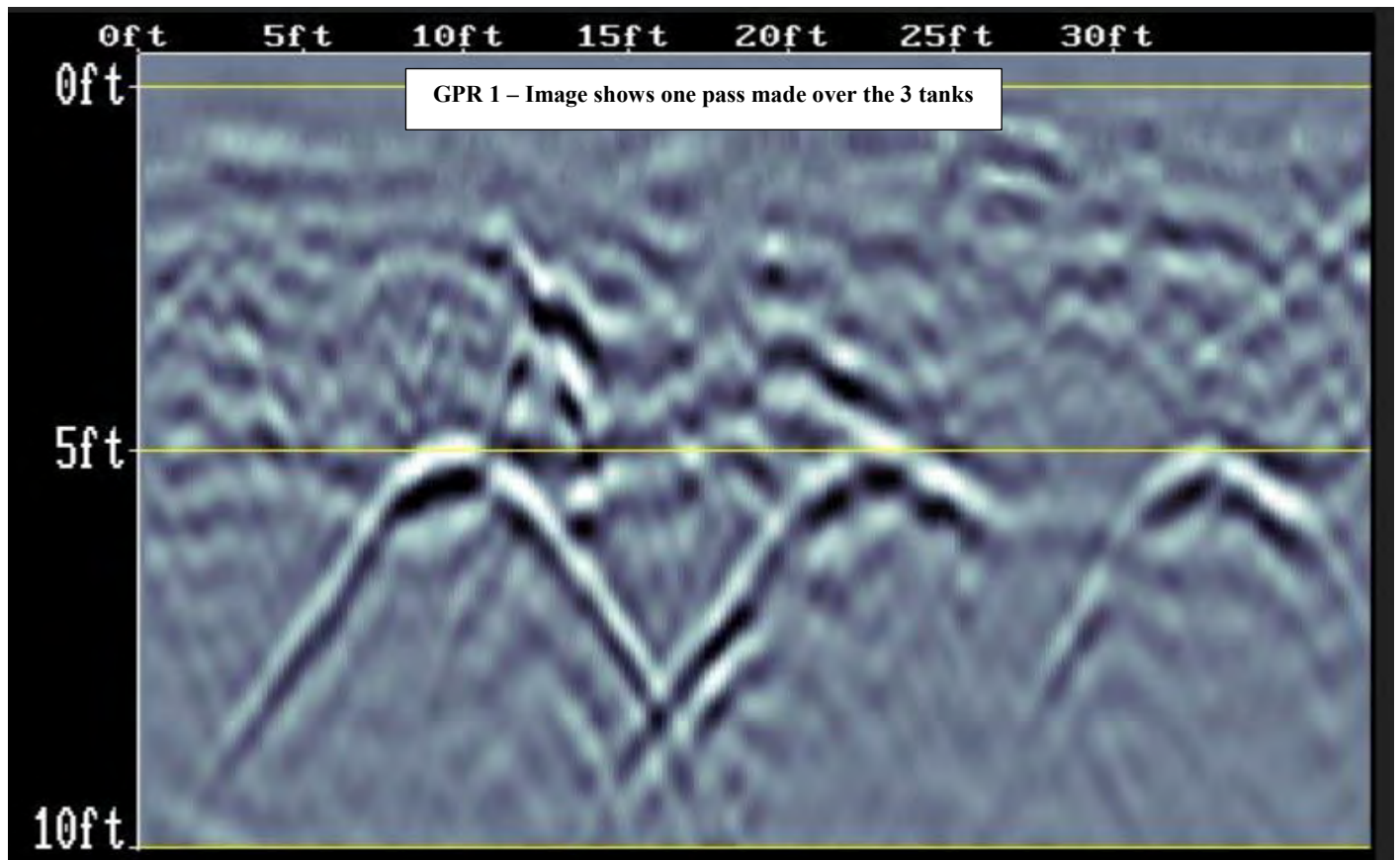
Utilities were painted in appropriate color, depths provided where possible.

**This report is back up to information relayed and marked on site at time of service. It is for informational purposes only.**



Blue	Water
Red	Power
Orange	Communications
Yellow	Gas/Flammable Fuel
White	Unknown
Green	Storm/Sanitary
Pink	UST









### **Subsurface Limitations**

Utility locating is the art and science of using non-intrusive methods to search for, find and mark out buried, unseen conduits or other objects. There are innumerable variables involved in locating underground utilities, such as topography, size and complexity of job site, depth and proximity of buried utilities, above ground obstructions, short turnaround schedules, changes in the scope of work, lack of (or outdated) blueprints and adverse weather conditions.

New York Leak Detection, Inc. (NYLD) has made a substantial financial investment in crossover technologies and training to meet our clients' needs when locating and mapping utilities. However, due to unpredictable factors that may affect the results, NYLD makes no guarantee, expressed or implied, with respect to the completeness or accuracy of the information provided. Any use or reliance on the information or opinion is at the risk of the user and NYLD shall not be liable for any damage or injury arising out of the use or misuse of the information provided.

NYLD strives to provide the highest quality utility location services possible with the technical expertise of our field specialists and state-of-the-art equipment used. Every effort is made to provide our clients with the most accurate information possible without adverse consequences.

NYLD makes no guarantee that all subsurface utilities and obstructions will be detected. GPR signal penetration might not be sufficient to detect all utilities. NYLD is not responsible for detecting subsurface utilities and obstructions that normally cannot be detected by the methods employed or that cannot be detected because of site conditions. NYLD is not responsible for maintaining mark-outs after leaving the work area. Mark-outs made in inclement weather and in high traffic areas may not last. Surveyor assumes responsibility of picking up data on site.

## **APPENDIX B      Soil Boring and Well Construction Logs**



ERM  
105 Maxess Road; Suite 316  
Melville, New York 11747  
Telephone: +1 (631) 756-8900

Client: Arnold & Porter

Project Name: Hoosick Falls

Project Number: 0378075

Project Location: Hoosick Falls, New York

DRILLING CONTRACTOR: Cascade Drilling

GROUND ELEVATION: 422.87 feet amsl

SAMPLE TYPE:

GRAPHIC LOG LEGEND

DATE BORING COMPLETED: 3/20/2019

PVC ELEVATION: 423.51 feet amsl

Hand Auger

Asphalt

Well-Graded Gravelly Sand

DATE WELL INSTALLED: 3/21/2019

NORTHING: 1485404.92

Sonic Drilling

Poorly-graded Gravel

Silty Sand

LOGGED BY: C. Payne

EASTING: 799692.01

Clayey Gravel

Silt

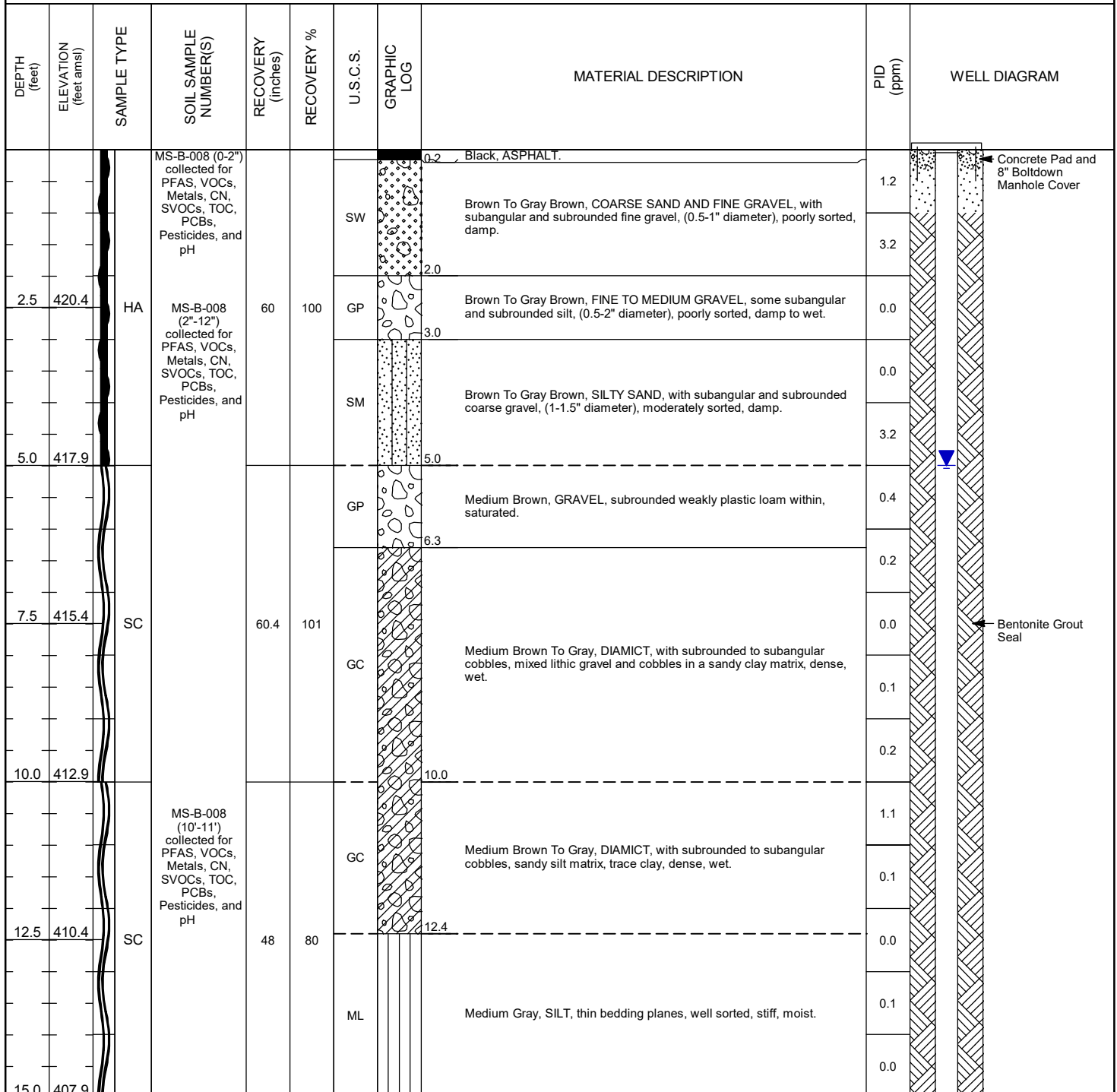
CHECKED BY: E. Marcus/ H. Usle

TOTAL DEPTH: 80 feet bgs

DIAMETER: 6 inches

DRILLING METHODS: Pre-cleared/Sonic Coring

NOTES: North American Datum 1983 State Plane New York East in US Survey Feet.



ACRONYM LEGEND:

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Client: Arnold & Porter

Project Name: Hoosick Falls

Project Number: 0378075

Project Location: Hoosick Falls, New York

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
17.5	405.4	SC		60	100	ML		Medium Gray, SILT, thin bedding planes, well sorted, stiff, moist. (continued)	1.6	
								0.0		
20.0	402.9	SC				ML		Medium Gray, FINE SANDY SILT, crumbled texture, thin bedding, well sorted, firm, dry.	0.0	
22.5	400.4							0.0		
25.0	397.9	SC	MS-B-008 (24-25') collected for for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH	84	70	ML			NM	
27.5	395.4							6.7		
30.0	392.9							Medium Gray, SILT, with fine sand, thin interbedded silt and sand, laminar, very stiff. parting along laminations, well sorted, very firm, wet.	2.7	
		3.2								
		1.6								
		6.3								
									12.8	
		7.9								
		9.4								

Bentonite Grout Seal

ACRONYM LEGEND:

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Project Location: Hoosick Falls, New York

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM	
		SC	MS-B-008 (32-33') collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, pH	67	112	GC		32.5	14.1		
								8.5			
35.0	387.9							1.3			
		SC		66	110	GC		35.0	0.0		
									0.0		
37.5	385.4					ML		35.5	0.0		
		SC		88.8	74	SW		40.3	0.2		
									0.1		
40.0	382.9								0.1		
42.5	380.4					GC		45.2	0.1		
			0.1								
45.0	377.9					ML		48.6	0.1		
			0.1								
47.5	375.4							49.0	0.0		
									0.1		
									NR		

Bentonite Grout Seal

Bentonite Seal

Filter Sand (#0)

ACRONYM LEGEND:

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Client: Arnold & Porter

Project Name: Hoosick Falls

Project Number: 0378075

Project Location: Hoosick Falls, New York

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM			
52.5	370.4	SC	MS-B-008 (50-52') collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, pH	97	81	GW	50.0 - 52.8	Dark Brown, MEDIUM SAND, trace angular fine gravel, mixed lithic, moderately sorted, loose, saturated.	0.0	<p>Well Screen (2" SCH 40 PVC/ 0.01" slot)</p> <p>End Cap</p> <p>Bentonite Seal</p>			
55.0	367.9						52.8 - 57.5	Dark Brown, GRAVEL, and subrounded sand, medium to coarse lithic gravel in a fine to medium lithic sand matrix, poorly sorted, loose, saturated.	0.0				
57.5	365.4						57.5 - 60.0	Medium Brown, FINE SAND, interbedded silt, fine lithic sand with thin silt interbeds, well sorted, cohesive, saturated.	0.0				
60.0	362.9						60.0 - 61.5	Medium Brown, GRAVEL, and subrounded coarse sand, medium to coarse lithic gravel, poorly sorted, loose, saturated.	0.0				
62.5	360.4	SC		97	81	GW	61.5 - 65.0	Medium Brown, GRAVEL, and subrounded coarse sand, medium to coarse lithic gravel, poorly sorted, loose, saturated.	0.0				
65.0	357.9												

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Project Name: Hoosick Falls

Project Number: 0378075

Project Location: Hoosick Falls, New York

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM	
67.5	355.4							Orange Brown To Gray Brown, DIAMICT, subangular fine to medium gravel in a sandy silt matrix, dense, moist.	0.0		
70.0	352.9								0.0		
72.5	350.4								0.0		
71.2		60	100			Dark Brown To Gray, CLAY, with angular phyllite, weathered phyllite clasts in a clay matrix, weakly plastic, moist.	0.0				
72.5	350.4						0.0				
75.0	347.9	SC					Dark Gray, PHYLLITE, weathered, oxide coatings along fractures, dry.	0.0			
77.5	345.4							0.0			
80.0	342.9							0.0			
									0.0		
								Bottom of Boring @ 80.0 feet bgs			
82.5	340.4										

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Client: Arnold & Porter Project Name: Hoosick Falls

Project Number: 0378075 Project Location: Hoosick Falls, New York

<b>DRILLING CONTRACTOR:</b> <u>Cascade Drilling</u>	<b>GROUND ELEVATION:</b> <u>427.91 feet amsl</u>	<b>SAMPLE TYPE:</b>	<b>GRAPHIC LOG LEGEND</b>
<b>DATE BORING COMPLETED:</b> <u>4/1/2019</u>	<b>PVC ELEVATION:</b> <u>428.33 feet amsl</u>	Hand Auger	Well-graded Sand with Silt
<b>DATE WELL INSTALLED:</b> <u>4/1/2019</u>	<b>NORTHING:</b> <u>1484929.24</u>	Sonic Drilling	Phyllite
<b>LOGGED BY:</b> <u>M. Frankel</u>	<b>EASTING:</b> <u>799557.74</u>		
<b>CHECKED BY:</b> <u>E. Marcus/ H. Usle</u>	<b>TOTAL DEPTH:</b> <u>8 feet bgs</u>		
<b>DIAMETER:</b> <u>3 inches</u>	<b>DRILLING METHODS:</b> <u>Pre-cleared/Sonic Coring</u>		

**NOTES:** North American Datum 1983 State Plane New York East in US Survey Feet.

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
			MS-B-010 (0-2") collected for PFAS.			SW-SM			0.0	<p>Concrete Pad and 8" Bolt-down Manhole Cover</p> <p>Bentonite Grout Seal</p> <p>Filter Sand (#0)</p> <p>Well Screen (2" SCH 40 PVC/ 0.01" slot)</p> <p>End Cap</p>
			MS-B-010 (2-12") collected for PFAS.			SW-SM			0.0	
2.5	425.4	HA		60	100	SW-SM		Brown, SILTY MEDIUM SAND, little gravel, (0.5-1" diameter), brick fragments, poorly sorted, loose, moist.	7.8	
						SW-SM		Brown, SILTY MEDIUM SAND, some fine gravel, (0.5-1" diameter), brick fragments, poorly sorted, loose, moist.	0.3	
5.0	422.9		MS-B-010 (4'-5") collected for PFAS.			SW-SM		Blue To Green Gray, SILTY MEDIUM SAND, some fine gravel, (0.5-1" diameter), odors present, poorly sorted, loose, moist.	7.7	
						SW-SM		Gray Brown, SILTY SAND, with angular fine gravel, poorly sorted, cohesive, saturated.	5.7	
						SW-SM		Gray Brown, SILTY SAND, with angular gravel, weak mottling, orange stringers present, poorly sorted, cohesive, wet.	0.0	
7.5	420.4	SC	MS-B-010 (5'-7") collected for PFAS, VOCs, CN, TOC, and pH.	36	100	SW-SM		Dark Gray, PHYLLITE, weathered, iron oxide stringers along weathering partings, weak and friable, dry.	0.0	
									8.0	
								Bottom of Boring @ 8.0 feet bgs		
10.0	417.9									

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**Client:** Arnold & Porter **Project Name:** Hoosick Falls  
**Project Number:** 0378075 **Project Location:** Hoosick Falls, New York

**DRILLING CONTRACTOR:** Cascade Drilling **GROUND ELEVATION:** 432.17 feet amsl **SAMPLE TYPE:** **GRAPHIC LOG LEGEND**  
**DATE BORING COMPLETED:** 3/14/2019 **PVC ELEVATION:** 432.66 feet amsl **Well-graded Sand** **Well-graded Sand with Silt**  
**DATE WELL INSTALLED:** 3/14/2019 **NORTHING:** 1484864.4 **Hand Auger** **Phyllite**  
**LOGGED BY:** M. Frankel **EASTING:** 799765.34 **Sonic Drilling**  
**CHECKED BY:** E. Marcus/ H. Usle **TOTAL DEPTH:** 14 feet bgs  
**DIAMETER:** 4.75 inches **DRILLING METHODS:** Pre-cleared/Sonic Coring

**NOTES:** North American Datum 1983 State Plane New York East in US Survey Feet.

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
			MS-B-011 (0"-2") collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH						0.0	Concrete Pad and 8" Bolt-down Manhole Cover
									0.0	Bentonite Seal
2.5	429.7	HA	MS-B-011 (2"-12") collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.	60	100	SW		Brown, FINE SAND, SILT, AND GRAVEL, little coarse gravel, brick fragments, poorly sorted, dry to moist.	0.0	Filter Sand (#0)
									0.0	
5.0	427.2								0.0	
									0.8	Well Screen (2" SCH 40 PVC/ 0.01" slot)
									0.7	End Cap
7.5	424.7	SC	MS-B-011 (5'-6") collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.	60	100	SW-SM		Dark Brown, SILTY SAND, with gravel, (0.5" diameter), poorly sorted, wet.	1.3	
									1.4	
									1.7	
10.0	422.2								0.0	Bentonite Seal
									0.0	
									0.0	
12.5	419.7	SC		48	100			Gray, PHYLLITE, pulverized from drilling from 6 to 10 feet bgs, dry.	0.0	
									0.0	
									0.0	
									0.0	
15.0	417.2							Bottom of Boring @ 14.0 feet bgs		

**ACRONYM LEGEND:** amsl = above mean sea level; bgs = below ground surface; CN = cyanide; NM = not measured; NR = no recovery; ppm = parts per million; PID = photoionization detector; PFAS = per- and polyfluoroalkyl substances; PCBs = polychlorinated biphenyls; PVC = polyvinyl chloride casing; SVOCs = semi-volatile organic compounds; TOC = total organic carbon; VOCs = volatile organic compounds



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Client: Arnold & Porter

Project Name: Hoosick Falls

Project Number: 0378075

Project Location: Hoosick Falls, New York

DRILLING CONTRACTOR: Cascade Drilling

GROUND ELEVATION: 432.26 feet amsl

SAMPLE TYPE:

GRAPHIC LOG LEGEND

DATE BORING COMPLETED: 3/14/2019

PVC ELEVATION: 432.60 feet amsl

Hand Auger

Poorly-graded Gravel

Poorly-graded Sand with Silt

DATE WELL INSTALLED: 3/14/2019

NORTHING: 1484763.6

Sonic Drilling

Clayey Sand

Concrete

LOGGED BY: M. Frankel

EASTING: 799940.61

Poorly-graded Sand

Phyllite

CHECKED BY: E. Marcus/ H. Usle

TOTAL DEPTH: 30 feet bgs

DIAMETER: 4.75 inches

DRILLING METHODS: Pre-cleared/Sonic Coring

NOTES: North American Datum 1983 State Plane New York East in US Survey Feet.

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
5	427	HA	MS-B-012 (0"-2") collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.	60	100	GP		0.3 Gray, GRAVEL, 3-inches of laid gravel overlaying native soil, dry.	0.0	
			MS-B-012 (2"-12") collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.			SP-SM		Brown To Light Gray, COARSE SAND WITH SILT AND GRAVEL, little cobble, brick fragments, poorly sorted, dry.	0.0	
			MS-B-012 (4'-5') collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.			GP		Light Brown To Gray, COARSE GRAVEL, wet.	0.0	
			MS-B-012 (7'-8') collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.	60	100	SC		Light Brown To Gray, CLAY AND SAND, some coarse gravel, plastic fragment at 7 feet bgs, damp to wet.	0.0	
		SC				SC		Light Brown To Gray, CLAY AND SAND, some coarse gravel, mottling at 8 feet bgs, moist to wet.	0.0	
10	422					SC		Light Brown To Gray, CLAY AND FINE SAND, some coarse gravel, moist.	0.2	
						SP		White To Gray, CONCRETE, moist.	0.0	
						SP		Light Brown To Gray, COARSE SAND, with brick, poorly sorted, moist.	0.0	
						SP		Black To Dark Brown, COARSE SAND, some metal fragments, poorly sorted, moist.	0.0	
15	417								0.0	
20	412	SC		0	0			NO RECOVERY.	NR	

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Client: Arnold & Porter

Project Name: Hoosick Falls

Project Number: 0378075

Project Location: Hoosick Falls, New York

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
25	407	SC		36	60	GP		White To Gray, VERY COARSE GRAVEL, some silt and sand, bedrock fragments in a matrix of silt and sand from 22 to 23 feet bgs, poorly sorted, dry to moist. (continued)	0.0	
									0.0	
									0.0	
25.0							NO RECOVERY.	NR		
30	402	SC		60	100			White To Gray, PHYLLITE, pulverized.	0.0	
									0.0	
									0.0	
									0.0	
									0.0	
30.0							Bottom of Boring @ 30.0 feet bgs			
35	397									
40	392									

ACRONYM LEGEND:

amsl = above mean sea level; bgs = below ground surface; CN = cyanide; NM = not measured; NR = no recovery; ppm = parts per million; PID = photoionization detector; PFAS = per- and polyfluoroalkyl substances; PCBs = polychlorinated biphenyls; PVC = polyvinyl chloride casing; SVOCs = semi-volatile organic compounds; TOC = total organic carbon; VOCs = volatile organic compounds



ERM  
105 Maxess Road; Suite 316  
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Telephone: +1 (631) 756-8900

Client: Arnold & Porter

Project Name: Hoosick Falls

Project Number: 0378075

Project Location: Hoosick Falls, New York

DRILLING CONTRACTOR: Cascade Drilling  
DATE BORING COMPLETED: 3/18/2019  
DATE WELL INSTALLED: 3/18/2019  
LOGGED BY: C. Payne  
CHECKED BY: E. Marcus/ H. Usle  
DIAMETER: 4.75 inches

GROUND ELEVATION: 433.03 feet amsl  
PVC ELEVATION: 433.37 feet amsl  
NORTHING: 1484834.43  
EASTING: 800144.82  
TOTAL DEPTH: 115 feet bgs  
DRILLING METHODS: Pre-cleared/Sonic Coring

SAMPLE TYPE:  
 Hand Auger  
 Sonic Drilling

GRAPHIC LOG LEGEND  
 Well-graded Sand  
 Poorly-graded Sand  
 Poorly-graded Gravelly Sand  
 Well-graded Gravelly Sand  
 Well-graded Sand with Silt  
 Well-Graded Gravelly Sand  
 Silty Clay

NOTES: North American Datum 1983 State Plane New York East in US Survey Feet.

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
5	428	HA	MS-B-013 (0"-2") collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.	48	80	SW		Brown, FINE SAND, SILT, AND GRAVEL, little coarse gravel, poorly sorted.	0.0	
								Brown To Light Brown, FINE SAND, SILT, AND GRAVEL, some cobbles, poorly sorted.	0.0	
								NO RECOVERY.	0.0	
10	423	SC	MS-B-013 (2"-12") collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.	60.5	101	SP		Dark Brown To Orange Brown, COARSE SAND, some (2-2.5" diameter), gravel, metal, and brick fragments, poorly sorted, moist.	0.5	
									0.0	
									0.8	
									2.8	
									1.0	
15	418	SC	MS-B-013 (8'-9') collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.	132	110	SP		Black, MEDIUM TO COARSE SAND, with gravel, white brick fragments from 13 to 14 feet bgs, poorly sorted, moist.	0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
20	413	SC				SP		Dark Brown, COARSE SAND, and gravel, (0.5-2" diameter), poorly sorted, moist.	0.0	
								Light To Dark Brown, COARSE SAND, with gravel, (2.5-3" diameter), metal fragments, poorly sorted, moist.	0.0	
								Dark Brown, FINE SAND, with gravel, (0.5-1" diameter), brick fragments, poorly sorted, moist.	0.0	
									0.0	
									0.0	
25	408	SC				SW-SM		Light Brown To Gray, FINE SILTY SAND, with gravel, (0.5-1.5" diameter), poorly sorted, moist.	0.0	
									0.0	
									0.0	
						SP		Light Brown, COARSE SAND, with gravel, (0.5-1" diameter), poorly sorted, moist.	0.5	

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Project Name: Hoosick Falls

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Project Location: Hoosick Falls, New York

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
30	403	SC	MS-B-013 (27'-28') collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.	60	100	SW-SM	26.0	Dark Brown To Black, SILTY FINE SAND, with fine gravel, mottling, sand content increasing with depth, poorly sorted, moist. <i>(continued)</i>	0.0	
						SW-SM	26.5	Light Brown, SAND, with gravel, poorly sorted, moist.	0.0	
						SW-SM	27.0	Light Brown To Gray, SILTY FINE SAND, trace gravel, clay and sand lenses, poorly sorted, moist.	0.0	
						SW-SM	29.0	Light Brown To Gray, SILTY FINE SAND, some gravel, sand lenses, clay content increasing with depth, poorly sorted, moist, orange mottling.	0.0	
35	398	SC		60	100	CL-ML	30.0	Gray, SILT, with fine sand and clay, phyllite fragments, poorly sorted, dry.	0.0	
								Gray, SILT, little gravel, quartz gravel fragments from 34.5 to 34.7 feet bgs, cobbles at 35 feet bgs (> 3" diameter), poorly sorted, dry.	0.2	
									0.0	
									0.0	
									0.0	
40	393	SC		120	100	ML	35.0		0.0	
									0.0	
									0.0	
									0.0	
									0.0	
45	388	SC		59.5	99	ML	45.0	Brown To Gray, SILT, some clay, well sorted, firm, dry.	0.0	
								Gray Brown, SILT, well sorted, firm, dry.	0.0	
									0.0	
									0.0	
									0.0	
50	383						49.5		0.0	
							50.0	NO RECOVERY.	NR	
						ML		Gray Brown, SILT, some fine sand lenses from 52 to 56 feet bgs, well sorted, firm, dry.	0.0	

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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
55	378	SC		120	100	ML		Gray Brown, SILT, some fine sand lenses from 52 to 56 feet bgs, well sorted, firm, dry. <i>(continued)</i>	0.0	Bentonite Seal
									0.0	
									0.1	
									0.0	
									0.0	
60	373	SC		54	90	CL-ML	60.0	Gray Brown, SILT, with clay, well sorted, firm, dry.	0.1	
									0.0	
									0.0	
									0.0	
									0.0	
65	368						64.5 65.0	NO RECOVERY.	NR	
70	363	SC		120	100	ML		Gray Brown, SILT, alternating layers of brown and gray from 65 to 70 feet bgs, well sorted, firm, dry.	0.1	
									0.0	
									0.0	
									0.0	
									0.0	
75	358	SC		60	100				0.0	
									0.0	
									0.0	
									0.0	
									0.0	
80	353					ML	79.3 80.0	Grayish Blue, SILT, some clay, well sorted, dense, dry.	0.1	
						CL-ML	82.5	Grayish Blue, SILT, with clay, well sorted, wet.	0.0	
						GP		Brown, MEDIUM GRAVEL, with coarse sand, weak orange mottling.	0.0	

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Client: Arnold & Porter

Project Name: Hoosick Falls

Project Number: 0378075

Project Location: Hoosick Falls, New York

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
85	348	SC	MS-B-013 (83'-84') collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.	113	94	GP		83.8 silty sand matrix, moderately sorted, loose, saturated.	0.0	
								Brown, MEDIUM GRAVEL, with coarse sand, weak orange mottling, silty sand matrix, moderately sorted, loose, saturated. (continued)	0.0	
									0.0	
									0.0	
									0.0	
			0.0							
90	343							0.0		
								91.1	0.0	
						SP		92.5 Gray Brown, MEDIUM SAND, with fine sand, dark lithic sand, well sorted, loose, saturated.	0.0	
						ML		93.1 Medium Gray, SILT, trace laminar bedding, well sorted, firm, saturated.	0.0	
95	338	SC		116	97	SP			0.0	Bentonite Seal
									0.0	
									0.0	
			0.0							
			0.0							
								98.0	0.0	
								Gray Brown, DIAMICT, with cobbles, coarse gravel and cobbles in a sandy matrix, minor clay, trace brown oxide stringers, firm, wet.	0.0	
100	333							100.0	0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
105	328	SC		99.6	83	GP			0.0	
								Medium Brown, MEDIUM GRAVEL, with subrounded sand and silt, increased silt and clay content, cohesive, saturated.	0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
110	323								0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	
									0.0	

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Client: Arnold & Porter Project Name: Hoosick Falls  
 Project Number: 0378075 Project Location: Hoosick Falls, New York

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
115	318	SC		60	100			Medium Gray, PHYLLITE, sharp contact, competent to 110 feet bgs, weathered from 110 to 115 feet bgs. (continued)	0.0 0.0 0.0	← Bentonite Seal
								Bottom of Boring @ 115.0 feet bgs		
120	313									
125	308									
130	303									
135	298									
140	293									

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Project Name: Hoosick Falls

Project Number: 0378075

Project Location: Hoosick Falls, New York

DRILLING CONTRACTOR: Cascade Drilling

GROUND ELEVATION: 429.98 feet amsl

SAMPLE TYPE:

GRAPHIC LOG LEGEND

DATE BORING COMPLETED: 3/27/2019

PVC ELEVATION: 430.23 feet amsl

Hand Auger

Well-Graded Gravel  
Well-Graded Gravelly Sand

DATE WELL INSTALLED: 3/27/2019

NORTHING: 1485113.45

Sonic Drilling

Concrete  
Well-graded Sandy Gravel

LOGGED BY: C. Payne

EASTING: 800121.02

Poorly-graded Gravelly Sand  
Silty Clay

CHECKED BY: E. Marcus/ H. Usle

TOTAL DEPTH: 40 feet bgs

DIAMETER: 6 inches

DRILLING METHODS: Pre-cleared/Sonic Coring

NOTES: North American Datum 1983 State Plane New York East in US Survey Feet.

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
5	425	HA	MS-B-014 (0"-2") collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.	60	100	GW		Brown, COBBLES AND COARSE GRAVEL, some subangular and subrounded coarse sand and gravel, (2-2.5" diameter), poorly sorted.	0.1	
								Dark Gray To Brown, COARSE TO FINE GRAVEL AND SAND, some subangular and subrounded cobbles, (0.5-1" diameter), poorly sorted.	0.0	
10	420	SC	MS-B-014 (2"-12") collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.	60	100	SW		Dark Gray To Brown, COARSE SAND AND FINE GRAVEL, some subangular and subrounded coarse gravel, (0.5" diameter), brick fragments, whole brick, and rebar, poorly sorted.	0.0	
									0.0	
									0.0	
									0.0	
15	415	SC		60	100	SW		Dark Gray to Red, SAND AND GRAVEL, with subrounded brick, wood debris and cobbles in a poorly sorted gravel and sand matrix, poorly sorted.	0.1	
									0.7	
									0.5	
20	410	SC	MS-B-014 (17"-18") collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.	40	67	GW		Dark Brown, GRAVEL AND SAND, with angular brick, debris, sand and gravel in a clayey silt matrix, poorly sorted, cohesive, wet.	0.1	
									0.7	
									0.0	
									0.0	
20	410	SC		40	67	SW		Gray Brown, SAND AND GRAVEL, with clayey silt, trace mottling and oxide stringers in silty matrix, trace slag, poorly sorted, cohesive, wet.	0.0	
									0.0	

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Project Location: Hoosick Falls, New York

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
25	405	SC	MS-B-014 (31'-32') collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.	58	97	SP	Dark Orange Brown, GRAVEL AND SAND, with angular brick, slag, brick, gravel and sand, heavily oxidized, poorly sorted, loose, moist. (continued)	0.0	Bentonite Seal	
						SP	Black, SLAG, with angular sand and gravel, poorly sorted, loose, dry.	0.0		
		SC	MS-B-014 (36'-38') collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.	51	85	CL-ML	Olive Gray, SILTY CLAY, with brick, trace slag fragments, brick throughout, poorly sorted, weakly plastic, wet.	0.0	Filter Sand (#0)	
30	400	SC		24	133	GP	Black To Gray, SANDY COARSE GRAVEL, with rounded cobbles, mixed lithic clasts, weakly sorted, loose, wet.	0.0	Well Screen (2" SCH 40 PVC/ 0.01" slot)	
						SW	Olive Gray, GRAVELLY COARSE SAND, with silty clay, angular clasts, moderate olfactory observation, poorly sorted, cohesive, wet.	20	End Cap	
								75.5		
35	395	SC		96	100	GP	Olive Gray, FINE TO MEDIUM GRAVEL, with subrounded medium sand, brown light non-aqueous phase liquid (LNAPL) present from 31.5 to 33 feet and 37 feet bgs, strong olfactory observation, moderately sorted, loose, saturated.	0.0	Bentonite Seal	
								42.3		
40	390							0.0		
								0.0		
								Bottom of Boring @ 40.0 feet bgs		

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Project Name: Hoosick Falls

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Project Location: Hoosick Falls, New York

DRILLING CONTRACTOR: Cascade Drilling

GROUND ELEVATION: 425.57 feet amsl

SAMPLE TYPE:

GRAPHIC LOG LEGEND

DATE BORING COMPLETED: 3/26/2019

PVC ELEVATION: 426.03 feet amsl

Hand Auger

Poorly-graded Gravel

Well-Graded Gravelly Sand

DATE WELL INSTALLED: 3/26/2019

NORTHING: 1485267.35

Sonic Drilling

Well-graded Sand

Poorly-graded Sand

LOGGED BY: M. Frankel

EASTING: 800035.22

Clayey Gravel

Well-graded Sandy Gravel

CHECKED BY: E. Marcus/ H. Usle

TOTAL DEPTH: 100 feet bgs

DIAMETER: 6 inches

DRILLING METHODS: Pre-cleared/Sonic Coring

NOTES: North American Datum 1983 State Plane New York East in US Survey Feet.

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
5	421	HA	MS-B-015 (0"-2") collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.	60	100	GP	1.0	Brown, COBBLES AND COARSE GRAVEL, some subangular and subrounded coarse sand, (2.5-3" diameter), brick fragments, poorly sorted.	0.0	<p>Concrete Pad and 8" Bolt-down Manhole Cover</p> <p>Bentonite Grout Seal</p> <p>Bentonite Grout Seal</p>
			MS-B-015 (2"-12") collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.			SW	5.0	Brown, COARSE SAND AND GRAVEL, subangular and subrounded (0.5-1" diameter), pulverized brick throughout, poorly sorted.	0.0	
						SW	7.0	Gray Brown, FINE TO COARSE SAND, and fine gravel, small glass fragments, poorly sorted, loose, moist.	0.8	
		SC	MS-B-015 (7'-8') collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.	39	65	SW	9.0	Red Brown, FINE TO COARSE SAND, and brick, brick, glass and wood debris, poorly sorted, loose, moist.	105.3	
									2.5	
									2.7	
		SC		46	77	SP		Dark Brown To Orange Brown, FINE TO MEDIUM SAND, with slag, slag fragments, oxide coating, loose, moist.	1.8	
									2.2	
									0.6	
									2.8	
15	411								5.3	
		SC		48	80				4.4	
									12.3	
									4.3	
									0.6	
20	406					SP	19.0	Dark Red Brown, FINE TO COARSE SAND, with brick, slag and coal debris, loose, moist.	0.3	
									2.6	
		SC	MS-B-015 (21'-22') collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.	60	100	GC	20.9	Medium Brown, DIAMICT, with rounded to subangular cobbles, mixed lithic gravel in a sandy clay matrix, poorly sorted, firm, cohesive, wet.	0.0	
									0.0	
									0.0	
25	401					GW	24.1	Medium Brown, GRAVEL, with subangular coarse sand, weakly sorted, loose, wet.	0.0	
							25.0		0.0	

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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
30	396	SC	MS-B-015 (25'-26') collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.	60	100	ML		Medium Gray to Light Brown, SILT, well sorted, cohesive, wet, mottling. (continued)	0.2	
								27.0	0.0	
								29.2	0.0	
35	391	SC	MS-B-015 (34'-36') collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.	112	93	ML		Medium Gray, SILT, well sorted, firm, saturated.	0.0	
								30.0	0.0	
								34.4	0.0	
40	386	SC	MS-B-015 (34'-36') collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.	112	93	ML		Medium Gray, DIAMICT, with cobbles, mixed lithic clasts in a sandy silt matrix, poorly sorted, dense, dry.	0.0	
								43.5	0.0	
								44.0	0.0	
45	381	SC	MS-B-015 (34'-36') collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.	120	100	GP-GM		Medium Gray, SILT, well sorted, dense, wet.	0.0	
								48.6	0.0	
								52.5	0.0	
50	376	SC	MS-B-015 (34'-36') collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.	120	100	SM		Light Brown, SANDY SILT, thinly bedded sandy silt with weak brown mottling, well sorted, dense, wet.	0.0	
								53.8	0.0	
								53.8	0.0	
55	376	SC	MS-B-015 (34'-36') collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.	120	100	SP		Light Brown, GRAVEL, and subrounded silt, mixed lithic cobbles and gravel in a sandy silt matrix, poorly sorted, cohesive, wet.	0.0	
								53.8	0.0	
								53.8	0.0	
60	376	SC	MS-B-015 (34'-36') collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.	120	100	SM		Light Brown, SILTY FINE SAND, trace fine gravel, laminar bedding, moderately sorted, cohesive, wet.	0.0	
								53.8	0.0	
								53.8	0.0	
65	376	SC	MS-B-015 (34'-36') collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.	120	100	SP		Gray Brown, MEDIUM TO COARSE SAND, trace silt, angular sand, moderately sorted, cohesive, wet.	0.0	
								53.8	0.0	
								53.8	0.0	
70	376	SC	MS-B-015 (34'-36') collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.	120	100	SP		Dark Gray, COARSE SAND, angular lithic sand, well sorted, loose, saturated.	0.0	
								53.8	0.0	
								53.8	0.0	

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ERM  
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 Telephone: +1 (631) 756-8900

Client: Arnold & Porter

Project Name: Hoosick Falls

Project Number: 0378075

Project Location: Hoosick Falls, New York

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
55	371	SC		115	96	GP		Medium Brown, FINE TO MEDIUM GRAVEL, and subrounded to subangular coarse sand, poorly sorted, loose, saturated. (continued)	0.0	
									0.0	
									0.0	
									0.0	
									0.0	
		0.0								
		0.0								
60	366	SC		120	100	ML		Medium Brown, DIAMICT, fine to medium mixed lithic gravel in a sandy silt matrix, poorly sorted, firm, wet.	0.0	
									0.1	
									0.0	
									0.0	
									0.0	
65	361	SC		120	100	ML		Light Brown To Gray, DIAMICT, friable, firm mixed gravel diamict with iron oxides on clast boundaries, poorly sorted, firm, dry.	0.0	
									0.1	
									0.0	
									0.0	
									0.0	
70	356	SC		120	100	SP		Medium Brown To Gray, VERY COARSE SAND, and subrounded to subangular fine to coarse gravel, lithic sand and gravel, trace cobbles and thin silty interbeds, poorly sorted, loose, saturated.	0.0	
									0.0	
									0.0	
									0.0	
									0.0	
75	351	SC		120	100	SP		Medium Brown To Gray, VERY COARSE SAND, and subrounded to subangular fine to coarse gravel, lithic sand and gravel, trace cobbles and thin silty interbeds, poorly sorted, loose, saturated.	0.0	
									0.0	
									0.0	
									0.0	
									0.0	
80	346	SC		120	100	SP		Medium Brown To Gray, VERY COARSE SAND, and subrounded to subangular fine to coarse gravel, lithic sand and gravel, trace cobbles and thin silty interbeds, poorly sorted, loose, saturated.	0.0	
									0.0	
									0.0	
									0.0	
									0.0	

← Bentonite Seal

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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
85	341	SC		104	87	SP		Medium Brown To Gray, VERY COARSE SAND, and subrounded to subangular fine to coarse gravel, lithic sand and gravel, trace cobbles and thin silty interbeds, poorly sorted, loose, saturated. <i>(continued)</i>	0.0	
									0.0	
									0.0	
									0.0	
									0.0	
		0.0								
		0.0								
		0.0								
		0.0								
		0.0								
		0.0								
90	336	SC		60	100			90.5 Gray Brown, PHYLLITE, with clay, weathered clasts in a weak clay matrix, iron oxides along fractures, stiff, wet.	0.0	
								0.0		
								0.0		
								0.0		
95	331	SC		18	30			Gray Brown, PHYLLITE, dry.	0.0	
								0.0		
								0.0		
								0.0		
								0.0		
100	326	Bottom of Boring @ 100.0 feet bgs								
105	321									
110	316									

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Client: Arnold & Porter Project Name: Hoosick Falls

Project Number: 0378075 Project Location: Hoosick Falls, New York

DRILLING CONTRACTOR: Cascade Drilling GROUND ELEVATION: 429.71 feet amsl SAMPLE TYPE: Hand Auger GRAPHIC LOG LEGEND: Well-graded Sandy Gravel  
 DATE BORING COMPLETED: 3/13/2019 PVC ELEVATION: not applicable  
 DATE WELL INSTALLED: 3/13/2019 NORTHING: 1485142.18  
 LOGGED BY: M. Frankel EASTING: 799922.48  
 CHECKED BY: E. Marcus/ H. Usle TOTAL DEPTH: 5 feet bgs  
 DIAMETER: 6 inches DRILLING METHODS: Pre-cleared/Sonic Coring  
 NOTES: Boring abandoned due to refusal during pre-clearing. North American Datum 1983 State Plane New York East in US Survey Feet.

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
		HA	MS-B-016 (0"-2") collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.			GW		Brown To Light Gray, COARSE SAND AND GRAVEL, some subangular and subrounded cobbles, (2.5-3" diameter), poorly sorted.	1.2	NOT APPLICABLE
		HA							0.0	
2.5	427.2	HA	MS-B-016 (2"-12") collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.	60	100			Brown To Light Brown, COARSE SAND AND GRAVEL, some subangular and subrounded coarse gravel, (0.5-1.5" diameter), Refusal, poorly sorted.	0.0	
		HA							0.0	
5.0	424.7									
Bottom of Boring @ 5.0 feet bgs										

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Project Number: 0378075 Project Location: Hoosick Falls, New York

<b>DRILLING CONTRACTOR:</b> <u>Cascade Drilling</u>	<b>GROUND ELEVATION:</b> <u>433.60 feet amsl</u>	<b>SAMPLE TYPE:</b>	<b>GRAPHIC LOG LEGEND</b>
<b>DATE BORING COMPLETED:</b> <u>3/25/2019</u>	<b>PVC ELEVATION:</b> <u>not applicable</u>	Hand Auger	Poorly-graded Gravelly Sand
<b>DATE WELL INSTALLED:</b> <u>3/25/2019</u>	<b>NORTHING:</b> <u>1485184.472</u>	Sonic Drilling	Silt
<b>LOGGED BY:</b> <u>C. Payne</u>	<b>EASTING:</b> <u>799797.5738</u>		Till/ Diamict
<b>CHECKED BY:</b> <u>E. Marcus/ H. Usle</u>	<b>TOTAL DEPTH:</b> <u>70 feet bgs</u>		Sandy Silt
<b>DIAMETER:</b> <u>6 inches</u>	<b>DRILLING METHODS:</b> <u>Pre-cleared/Sonic Coring</u>		Till 2/ Diamict 2
			Phyllite

NOTES: No significant water bearing zone encountered. North American Datum 1983 State Plane New York East in US Survey Feet.

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM			
2.5	431.1	HA	MS-B-017 (0-2") collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.	60	100	SP		Brown, COARSE SAND AND GRAVEL, subangular and subrounded (2.5-3" diameter), poorly sorted.	1.2	NOT APPLICABLE			
								Brown, COARSE SAND AND GRAVEL, subangular and subrounded (0.5-1" diameter), poorly sorted.	0.0				
5.0	428.6										Brown To Light Brown, COARSE SAND AND GRAVEL, subangular and subrounded (2-2.5" diameter), poorly sorted.	0.0	
7.5	426.1	SC	MS-B-017 (5'-6') collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.	54	90	ML		Medium Gray to Light Brown, SILT, interbedded fine sand, thinly bedded silt with fine sand interbeds, well sorted, firm, moist, brown mottling.	0.0				
10.0	423.6												0.0
12.5	421.1	SC						Medium Gray, DIAMICT, with subrounded fine to medium gravel, subrounded gravel in a silt matrix, gravel content and clast diameter increasing with depth, drag stones present with striations, poorly sorted, dense, dry to slightly moist.	0.0				
													0.0
15.0	418.6												0.0

ACRONYM LEGEND:

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Project Location: Hoosick Falls, New York

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
17.5	416.1	SC		62	103			Medium Gray, DIAMICT, with subrounded fine to medium gravel, subrounded gravel in a silt matrix, gravel content and clast diameter increasing with depth, drag stones present with striations, poorly sorted, dense, dry to slightly moist. <i>(continued)</i>	0.0	NOT APPLICABLE
									0.0	
									0.0	
20.0	413.6							0.0		
								0.0		
								0.0		
22.5	411.1	SC		60	100			Medium Gray, DIAMICT, mixed lithic clasts in a silty sand matrix, poorly sorted, dense, damp.	0.1	
									0.1	
									0.1	
25.0	408.6							0.1		
								0.1		
								0.1		
27.5	406.1	SC		60	100			Medium Gray, DIAMICT, matrix dominant, mixed lithic clasts in a sandy silt matrix, poorly sorted, dense, dry.	0.1	
									0.1	
									0.1	
30.0	403.6							0.1		
								0.1		
								0.1		

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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM			
35.0	398.6	SC	MS-B-017 (33'-34') collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.	60	100	ML	33.2	Medium Gray, DIAMICT, with silt, silt dominated diamict, fine to medium mixed lithic clast inclusions decreasing with depth, poorly sorted, dense, dry. (continued)	0.1	NOT APPLICABLE			
													0.0
												Gray Brown, SANDY SILT, and gravel, silty sand matrix with diamict inclusions, poorly sorted, cohesive, wet.	0.0
							35.7		0.0				
37.5	396.1	SC		53	88			Medium Gray, DIAMICT, subangular compacted silt matrix with fine to medium subangular to angular lithic gravels, poorly sorted, dense, dry.	0.1				
									0.1				
									0.2				
40.0	393.6						40.0		0.3				
									0.2				
								Gray Brown, DIAMICT, subrounded mixed lithic clasts in a silty sand matrix, poorly sorted, firm, moist.	0.2				
45.0	388.6	SC		111	93				0.6				
									0.6				
									0.1				
47.5	386.1						46.6		0.1				
								Medium Gray, DIAMICT, subrounded mixed lithic clasts in a clayey silt matrix, dry and crumbly texture, poorly sorted, firm, dry.	0.3				

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Project Location: Hoosick Falls, New York

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
										NOT APPLICABLE
52.5	381.1	SC		91	76				0.1	Medium Gray, DIAMICT, subrounded mixed lithic clasts in a clayey silt matrix, dry and crumbly texture, poorly sorted, firm, dry. (continued)
								0.8		
55.0	378.6							0.2		
								0.2		
57.5	376.1							0.1		
60.0	373.6							0.1		
62.5	371.1	SC		60	100				0.1	
65.0	368.6							0.1		
								0.1		

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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
67.5	366.1	SC		36	60			Black, PHYLLITE, fissile, minor weathering, quartz vein fragment, moisture likely from drilling water, wet. <i>(continued)</i>	0.1	NOT APPLICABLE
70.0	363.6							70.0		
								<i>Bottom of Boring @ 70.0 feet bgs</i>		
72.5	361.1									
75.0	358.6									
77.5	356.1									
80.0	353.6									
82.5	351.1									

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Project Number: 0378075

Project Location: Hoosick Falls, New York

DRILLING CONTRACTOR: Cascade Drilling  
DATE BORING COMPLETED: 3/21/2019  
DATE WELL INSTALLED: 3/21/2019  
LOGGED BY: M. Frankel  
CHECKED BY: E. Marcus/ H. Usle  
DIAMETER: 6 inches

GROUND ELEVATION: 420.74 feet amsl  
PVC ELEVATION: 421.19 feet amsl  
NORTHING: 1485461.02  
EASTING: 799749.59  
TOTAL DEPTH: 80 feet bgs  
DRILLING METHODS: Pre-cleared/Sonic Coring

SAMPLE TYPE:  
Hand Auger  
Sonic Drilling

GRAPHIC LOG LEGEND  
Poorly-graded Gravel with Silt  
Well-Graded Gravelly Sand  
Silty Clay  
Poorly-graded Gravel  
Silty Sand  
Poorly-graded Sand

NOTES: North American Datum 1983 State Plane New York East in US Survey Feet.

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
5	416	HA	MS-B-018 (0"-2") collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.	60	100	GP-GM	[Graphic Log Pattern]	Brown To Gray Brown, SILT AND GRAVEL, subangular and subrounded (0.5" diameter), poorly sorted, damp to wet.	0.0	Concrete Pad and 8" Bolt-down Manhole Cover
									0.0	
10	411	SC	MS-B-018 (2"-12") collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.	60	100	GP	[Graphic Log Pattern]	Brown To Gray Brown, FINE TO MEDIUM GRAVEL, some silt, (0.5-2" diameter), subangular to subrounded, poorly sorted, damp to wet.	0.0	Bentonite Grout Seal
									0.0	
									0.0	
15	406	SC		55	92	SW	[Graphic Log Pattern]	Dark Red Brown, SAND AND GRAVEL, with silt, subangular and subrounded clasts, poorly sorted, loose, wet.	5.6	Bentonite Grout Seal
									0.5	
									0.7	
									2.4	
20	401	SC	MS-B-018 (18'-19') collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.	53	88	SW	[Graphic Log Pattern]	Dark Red Brown, SAND AND GRAVEL, with slag, wood debris and slag with mixed lithic subangular gravel, heavy iron oxide staining, poorly sorted, loose, moist.	9.2	Bentonite Grout Seal
									0.4	
									2.0	
									0.5	
									0.0	
20	401	SC		53	88	SM	[Graphic Log Pattern]	Light Brown, SAND AND SILT, with subangular clay, fine to medium lithic sand, silt and clay mixed with rock and brick fragments, poorly sorted, weakly plastic, wet.	16.1	Bentonite Grout Seal
									0.7	
									0.1	
20	401	SC		53	88	CL-ML	[Graphic Log Pattern]	Light Brown To Gray, CLAY AND SILT, with subrounded gravel, brown to gray mottling in a silty clay matrix, mixed lithic gravel and brick fragments, poorly sorted, medium plasticity, moist.	17.8	Bentonite Seal
									0.0	
20	401	SW							7.1	

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DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
25	396	SC	MS-B-018 (24'-25') collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.	54	90	SW	20.4	Dark Red Brown, SAND AND GRAVEL, subangular slag debris with mixed lithic subangular gravel, poorly sorted, loose, wet. (continued)	0.2	
		SW					Dark Brown To Gray, SAND AND GRAVEL, subangular and subrounded dark coloration with "humic organic-like" odor, poorly sorted, loose, saturated.	0.2		
		SP				22.8	Medium Gray, FINE TO MEDIUM SAND, with subangular fine gravel, cobble, thinly bedded lithic sand, white and black flecked coloration, weakly sorted, loose, saturated.	0.0		
		ML				24.1	Light Brown To Gray, SILT, interbedded fine sand, thinly bedded, orange iron oxide stringers, mottling along bedding, well sorted, firm, wet.	0.0		
30	391	SC	MS-B-018 (40'-42') collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.	43	72	ML	25.4	Light Gray, SILT, interbedded fine sand, thinly laminated to bedded silt with fine sand stringers, well sorted, firm, moist.	0.0	
		ML						0.0		
		ML						0.0		
		ML						0.0		
35	386	SC	MS-B-018 (40'-42') collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.	120	100	ML	34.9	Medium Gray, SILT, well sorted, very firm, moist.	0.0	
		ML				35.3	0.0			
		ML				38.0	Medium Gray, DIAMICT, subrounded fine to medium mixed lithic subrounded gravel in a silty clay matrix, dominant, poorly sorted, very dense, dry.	0.1		
		ML				40.0	Medium Gray, DIAMICT, with subrounded cobbles, lithic clasts and diameter increasing with depth, poorly sorted, very dense, dry.	0.0		
40	381	SC	MS-B-018 (40'-42') collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.			ML	41.6	Olive Gray, FINE SANDY SILT, orange mottling stringers, thinly bedded, well sorted, cohesive, saturated.	0.0	
		SM					Dark Gray, SILTY FINE SAND, thinly bedded sands and silts, well sorted, cohesive, saturated.	0.0		

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Project Number: 0378075

Project Location: Hoosick Falls, New York

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
45	376	SC		124	103	SM		Dark Gray, SILTY FINE SAND, thinly bedded sands and silts, well sorted, cohesive, saturated. <i>(continued)</i>	0.0	
						SM		Medium Gray, SILTY SAND, interbedded subangular fine gravel, silty sand with thin interbeds of lithic gravels, moderately sorted, cohesive, saturated.	0.1	
50	371						49.5		0.0	
									0.0	
									0.0	
55	366	SC		120	100	GW		Medium Gray to Light Brown, FINE TO COARSE GRAVEL, with subangular and subrounded coarse sand, mixed lithic clasts, weakly sorted, loose, saturated.	0.0	
									0.0	
									0.0	
									0.1	
									0.2	
60	361						59.1	Dark Gray, DIAMICT, with subrounded cobbles, abundant mixed lithic gravel clasts in a stiff silty clay matrix, oxide stringers on periphery of cobbles, poorly sorted, dense, damp.	0.0	
									0.0	
									0.0	
									0.0	
65	356	SC		118	98	GW		Medium Brown To Gray, MEDIUM TO COARSE GRAVEL, and subangular and subrounded sand, subrounded mixed lithic gravel in a sandy silt matrix, poorly sorted, soft, cohesive, saturated.	0.0	
										0.0
									0.0	
									0.0	

ACRONYM LEGEND:

amsl = above mean sea level; bgs = below ground surface; CN = cyanide; NM = not measured; NR = no recovery; ppm = parts per million; PID = photoionization detector; PFAS = per- and polyfluoroalkyl substances; PCBs = polychlorinated biphenyls; PVC = polyvinyl chloride casing; SVOCs = semi-volatile organic compounds; TOC = total organic carbon; VOCs = volatile organic compounds





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 Telephone: +1 (631) 756-8900

Client: Arnold & Porter

Project Name: Hoosick Falls

Project Number: 0378075

Project Location: Hoosick Falls, New York

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
70	351	SC		120	100	GW		Medium Brown To Gray, MEDIUM TO COARSE GRAVEL, and subangular and subrounded sand, subrounded mixed lithic gravel in a sandy silt matrix, poorly sorted, soft, cohesive, saturated. <i>(continued)</i>	0.1	
								Gray Brown, DIAMICT, mixed lithic clasts in a sandy clay matrix, some phyllite clasts, poorly sorted, dense, moist.	0.0	
								Dark Gray, DIAMICT, with angular phyllite, monolithic, angular clasts of phyllite, medium to coarse gravel and cobbles in silty phyllite flour, trace lithic clasts, poorly sorted, dense, moist.	0.0	
								Dark Gray, PHYLLITE, weathered, pulverized from drilling, trace iron oxide coatings on fracture surfaces, moist.	0.0	
75	346	Dark Gray, PHYLLITE.	0.0							
80	341						80.0		0.0	
								<i>Bottom of Boring @ 80.0 feet bgs</i>		
85	336									

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Client: Arnold & Porter

Project Name: Hoosick Falls

Project Number: 0378075

Project Location: Hoosick Falls, New York

DRILLING CONTRACTOR: Cascade Drilling

GROUND ELEVATION: 422.55 feet amsl

SAMPLE TYPE:

GRAPHIC LOG LEGEND

DATE BORING COMPLETED: 3/19/2019

PVC ELEVATION: 425.68 feet amsl

Hand Auger

Poorly-graded Gravelly Sand

Poorly-graded Sand with Silt

DATE WELL INSTALLED: 3/19/2019

NORTHING: 1485693.45

Sonic Drilling

Low Plasticity Sandy Clay

Silty Clay

LOGGED BY: M. Frankel

EASTING: 799402.61

CHECKED BY: E. Marcus/ H. Usle

TOTAL DEPTH: 85 feet bgs

DIAMETER: 6 inches

DRILLING METHODS: Pre-cleared/Sonic Coring

Sandy Silt

Silt

NOTES: North American Datum 1983 State Plane New York East in US Survey Feet.

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
5	418	HA	MS-B-019 (0'-2') collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH. MS-B-018 (2'-12") collected for PFAS.	60	100	SP	1.0	Dark Brown, ORGANIC SAND, with subangular and subrounded fine gravel, (0.5" diameter), brick fragments, poorly sorted, damp.	0.0	
							3.0	Black To Gray, COARSE SAND, with subangular and subrounded fine gravel, (0.5-1" diameter), brick and concrete fragments, poorly sorted, damp.	0.0	
							4.0	Brown To Dark Brown, SAND AND SILT, little subangular and subrounded coarse gravel, (2.5-3" diameter), poorly sorted, dry to moist.	0.0	
							5.0	Light Brown, SAND AND SILT, some coarse sand, poorly sorted, moist.	0.0	
10	413	SC	MS-B-019 (7'-8') collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.	53	88	CL	7.8	Gray To Brown, SANDY CLAY, with subrounded medium gravel, organic matter, poorly sorted, soft, low plasticity, wet.	0.0	
							8.4	Gray To Brown, SANDY CLAY, with rounded medium gravel, poorly sorted, moderate plasticity, wet, mottling.	0.0	
15	408	SC	MS-B-019 (9'-10') collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.	55	92	CL	9.9	Gray To Brown, SANDY CLAY, with rounded fine to medium gravel, poorly sorted, medium stiff, high plasticity, saturated.	0.0	
							20.0		0.0	
20	403	SC		45	75				0.0	

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**Client:** Arnold & Porter      **Project Name:** Hoosick Falls  
**Project Number:** 0378075      **Project Location:** Hoosick Falls, New York

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
25	398	SC	MS-B-019 (21'-23') collected for PFAS, VOCs, Metals, CN, SVOCs, TOC, PCBs, Pesticides, and pH.	97	81	CL- ML		Medium Gray, DIAMICT, with silty clay, subrounded fine gravel in a silty clay matrix, light brown mottling, poorly sorted, very stiff, saturated. (continued)	0.1	
									0.1	
									0.2	
									0.1	
									0.1	
									0.1	
									0.1	
									0.1	
									0.0	
									0.0	
30	393	SC				CL- ML		Medium Gray, DIAMICT, with rounded silty clay, medium to coarse subangular to rounded gravel, silty clay matrix, trace medium-grained sand, poorly sorted, very dense, saturated.		
35	388	SC		96	80	ML		Medium Gray, SANDY SILT, some medium to coarse sand, poorly sorted, very loose, saturated.		
40	383	SC				ML		Medium Gray, SILT, well sorted, stiff, moist.		
		SC				CL		Medium Gray, CLAY, trace silt, well sorted, very dense, damp.		
								Medium Gray, DIAMICT, with subangular and subrounded medium to coarse gravel, some medium to coarse sand, poorly sorted, very dense.		

Bentonite Seal

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Client: Arnold & Porter

Project Name: Hoosick Falls

Project Number: 0378075

Project Location: Hoosick Falls, New York

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM
45	378	SC		99	83			saturated. Medium Gray, DIAMICT, with subangular and subrounded medium to coarse gravel, some medium to coarse sand, poorly sorted, very dense, saturated. (continued)	0.0	
								44.6	0.0	
								Gray To Blue Gray, DIAMICT, with subangular and subrounded medium to coarse gravel, medium to coarse gravel in a silty clay matrix, poorly sorted, medium dense, dry to moist.	0.0	
									48.3	
50	373							Gray To Olive Gray, DIAMICT, with subangular and subrounded medium gravel, medium gravel in a silty clay matrix, poorly sorted, medium stiff, wet.	0.1	
								0.1		
								0.1		
								0.1		
55	368	SC		98	82			Gray To Light Brown, DIAMICT, with fine to coarse gravel, trace medium cobbles, sandy clay matrix, some coarse sand, poorly sorted, very stiff, damp.	0.1	
								53.8	0.1	
								56.2	0.1	
								Gray To Light Brown, SANDY SILT, trace well rounded fine gravel, poorly sorted, medium stiff, wet.	0.0	
Gray To Light Brown, FINE SAND, trace well rounded fine gravel, moderately sorted, loose to medium dense, wet.	0.0									
	60	363						Gray To Light Brown, SILT, trace fine sand, well sorted, medium stiff, wet.	0.0	
57.6								0.0		
Medium Brown, SILTY CLAY, trace coarse sand, poorly sorted, firm, low plasticity, wet.								0.0		
								Brown To Dark Brown, COARSE SAND, some subangular fine gravel, trace fine cobbles from 64 to 70 feet bgs, moderately sorted, loose, saturated.	0.0	
65	358	SC		101	84				0.0	
								0.0		
								0.0		
								0.0		

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Client: Arnold & Porter

Project Name: Hoosick Falls

Project Number: 0378075

Project Location: Hoosick Falls, New York

DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	WELL DIAGRAM	
70	353					SP		Brown To Dark Brown, COARSE SAND, some subangular fine gravel, trace fine cobbles from 64 to 70 feet bgs, moderately sorted, loose, saturated. (continued)	0.1 0.0 0.0 0.0		
75	348	SC		107	89			Medium Gray, DIAMICT, with subangular and subrounded medium to coarse gravel, sandy clay matrix, poorly sorted, medium stiff, moist.	0.0 0.0 0.0 0.0 0.0 0.0		
80	343							Medium Gray, PHYLLITE, weathered, pulverized from drilling, dry.	0.0 0.0 0.0 0.0		
85	338	SC		60	100				0.0 0.0 0.0		
								Bottom of Boring @ 85.0 feet bgs			

ACRONYM LEGEND:

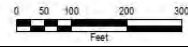
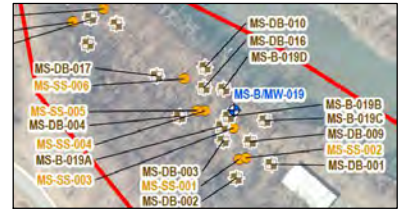
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**Client:** Arnold & Porter **Project Name:** Hoosick Falls  
**Project Number:** 0378075 **Project Location:** Hoosick Falls, New York

**DRILLING CONTRACTOR:** Parratt Wolff, Inc. **GROUND ELEVATION:** 429.66 feet amsl  
**DATE STARTED:** 12/4/2019 **NORTHING:** 1485596.3623  
**DATE COMPLETED:** 12/4/2019 **EASTING:** 799486.6553  
**LOGGED BY:** J. Vause **TOTAL DEPTH:** 3 feet bgs  
**CHECKED BY:** H. Usle **DIAMETER:** 2.5 inches  
**DRILLING METHOD(S):** Geoprobe 7720DT (Track)  
**DATUM:** North American Datum 1983 State Plane New York East in US Survey Feet.  
**NOTES:** Metals delineation boring in the vicinity of MS-SS-001, -002, and -003.



DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)					
2.5	427.2	DP	MS-DB-001 (0-1) collected for Metals	36	100	ML		Dark Brown, SILT, and organics, soft, moist.	0.0					
													Dark Brown, SILT AND FINE SAND, some fine gravel, cohesive, moist.	0.0
													White, CONCRETE.	0.0
5.0	424.7							Bottom of Boring @ 3.0 feet bgs						
7.5	422.2													
10.0	419.7													

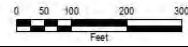
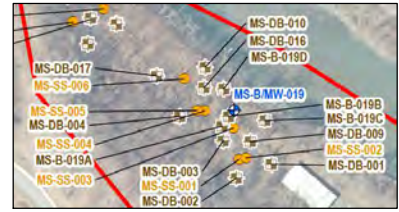
<b>SAMPLE TYPE:</b> <input checked="" type="checkbox"/> Direct Push	<b>GRAPHIC LOG LEGEND:</b> Silt              Poorly-graded Sand with Silt              Concrete	<b>ACRONYM LEGEND:</b> amsl = above mean sea level bgs = below ground surface NM = not measured NR = no recovery ppm = parts per million PID = photoionization detector PFAS = per- and polyfluoroalkyl substances SVOCs = semi-volatile organic compounds U.S.C.S. = Unified Soil Classification System VOCs = volatile organic compounds
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**Client:** Arnold & Porter **Project Name:** Hoosick Falls  
**Project Number:** 0378075 **Project Location:** Hoosick Falls, New York

**DRILLING CONTRACTOR:** Parratt Wolff, Inc. **GROUND ELEVATION:** 446.50 feet amsl  
**DATE STARTED:** 12/4/2019 **NORTHING:** 1485569.9784  
**DATE COMPLETED:** 12/4/2019 **EASTING:** 799421.4462  
**LOGGED BY:** J. Vause **TOTAL DEPTH:** 3 feet bgs  
**CHECKED BY:** H. Usle **DIAMETER:** 2.5 inches  
**DRILLING METHOD(S):** Geoprobe 7720DT (Track)  
**DATUM:** North American Datum 1983 State Plane New York East in US Survey Feet.  
**NOTES:** Metals delineation boring in the vicinity of MS-SS-001, -002, and -003.



DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
2.5	444.0	DP	MS-DB-002 (0-1) collected for PFAS and Metals	36	100	ML		Black, SILT, and organics, "slag-like" material, soft, moist.	0.0
						SM		Dark Brown, SILTY FINE SAND, some medium gravel, loose, wet.	0.0
			SC				Light Brown, CLAYEY FINE SAND, some medium gravel, firm, moist.	0.0	
5.0	441.5								
7.5	439.0								
10.0	436.5							Bottom of Boring @ 3.0 feet bgs	

**SAMPLE TYPE:**  
 Direct Push

**GRAPHIC LOG LEGEND:**  
 Silt     
 Silty Sand     
 Clayey Sand

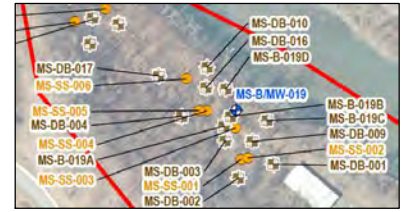
**ACRONYM LEGEND:**  
 amsl = above mean sea level  
 bgs = below ground surface  
 NM = not measured  
 NR = no recovery  
 ppm = parts per million  
 PID = photoionization detector  
 PFAS = per- and polyfluoroalkyl substances  
 SVOCs = semi-volatile organic compounds  
 U.S.C.S. = Unified Soil Classification System  
 VOCs = volatile organic compounds



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**Client:** Arnold & Porter **Project Name:** Hoosick Falls  
**Project Number:** 0378075 **Project Location:** Hoosick Falls, New York

**DRILLING CONTRACTOR:** Parratt Wolff, Inc. **GROUND ELEVATION:** 472.14 feet amsl  
**DATE STARTED:** 12/4/2019 **NORTHING:** 1485639.7435  
**DATE COMPLETED:** 12/4/2019 **EASTING:** 799396.6823  
**LOGGED BY:** J. Vause **TOTAL DEPTH:** 3 feet bgs  
**CHECKED BY:** H. Usle **DIAMETER:** 2.5 inches  
**DRILLING METHOD(S):** Geoprobe 7720DT (Track)  
**DATUM:** North American Datum 1983 State Plane New York East in US Survey Feet.  
**NOTES:** Soil samples collected as part of metals and SVOCs delineation. Location is of MS-MW-019.



DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
			MS-DB-003 (0-1) collected for Metals			SM		Black, SILTY FINE SAND, and organics, few wood fragments, loose, moist.	0.0
		DP		36	100	CL-ML		Light Brown, CLAYEY SILT, and fine to coarse gravel, coarsening with depth, lithic phyllite clasts, firm, dry.	0.0
2.5	469.6		MS-DB-003 (2-3) collected for Metals						0.0
								Bottom of Boring @ 3.0 feet bgs	
5.0	467.1								
7.5	464.6								
10.0	462.1								

**SAMPLE TYPE:**  
 Direct Push

**GRAPHIC LOG LEGEND:**  
 Silty Sand     Silty Clay

**ACRONYM LEGEND:**  
amsl = above mean sea level  
bgs = below ground surface  
NM = not measured  
NR = no recovery  
ppm = parts per million  
PID = photoionization detector  
PFAS = per- and polyfluoroalkyl substances  
SVOCs = semi-volatile organic compounds  
U.S.C.S. = Unified Soil Classification System  
VOCs = volatile organic compounds

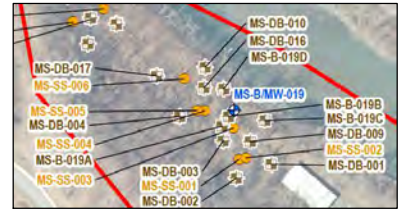





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**Client:** Arnold & Porter **Project Name:** Hoosick Falls  
**Project Number:** 0378075 **Project Location:** Hoosick Falls, New York

**DRILLING CONTRACTOR:** Parratt Wolf, Inc. **GROUND ELEVATION:** 436.26 feet amsl  
**DATE STARTED:** 12/4/2019 **NORTHING:** 1485685.2966  
**DATE COMPLETED:** 12/4/2019 **EASTING:** 799315.5483  
**LOGGED BY:** J. Vause **TOTAL DEPTH:** 3 feet bgs  
**CHECKED BY:** H. Usle **DIAMETER:** 2.5 inches  
**DRILLING METHOD(S):** Geoprobe 7720DT (Track)  
**DATUM:** North American Datum 1983 State Plane New York East in US Survey Feet.  
**NOTES:** Metals and SVOCs delineation boring in the vicinity of MS-SS-004, -005, and -006.



DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
2.5	433.8	DP	MS-DB-004 (0-1) collected for SVOCs, PFAS, and Metals	36	100	SM		Black, SILTY FINE SAND, some fine to medium gravel, loose, moist.	0.0
5.0	431.3								
7.5	428.8								
10.0	426.3		MS-DB-004 (2-3) collected for SVOCs, PFAS, and Metals					Bottom of Boring @ 3.0 feet bgs	

**SAMPLE TYPE:**  
 Direct Push

**GRAPHIC LOG LEGEND:**  
 Silty Sand

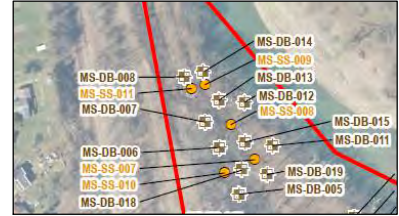
**ACRONYM LEGEND:**  
 amsl = above mean sea level  
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 NM = not measured  
 NR = no recovery  
 ppm = parts per million  
 PID = photoionization detector  
 PFAS = per- and polyfluoroalkyl substances  
 SVOCs = semi-volatile organic compounds  
 U.S.C.S. = Unified Soil Classification System  
 VOCs = volatile organic compounds



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**Client:** Arnold & Porter **Project Name:** Hoosick Falls  
**Project Number:** 0378075 **Project Location:** Hoosick Falls, New York

**DRILLING CONTRACTOR:** Parratt Wolf, Inc. **GROUND ELEVATION:** 442.38 feet amsl  
**DATE STARTED:** 12/4/2019 **NORTHING:** 1485820.6259  
**DATE COMPLETED:** 12/4/2019 **EASTING:** 799144.3874  
**LOGGED BY:** J. Vause **TOTAL DEPTH:** 3 feet bgs  
**CHECKED BY:** H. Usle **DIAMETER:** 2.5 inches  
**DRILLING METHOD(S):** Geoprobe 7720DT (Track)  
**DATUM:** North American Datum 1983 State Plane New York East in US Survey Feet.  
**NOTES:** SVOCs delineation boring in the vicinity of MS-SS-007, -008, and -010.



DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
		DP	MS-DB-005 (0-1) collected for SVOCs	36	100	GP-GM		Black, SILT AND GRAVEL, some organics, loose, moist.	0.0
2.5	439.9		MS-DB-005 (2-3) collected for SVOCs					SM	Medium Brown, SILTY FINE SAND, and subangular medium gravel, loose, moist.
5.0	437.4								
7.5	434.9								
10.0	432.4							Bottom of Boring @ 3.0 feet bgs	

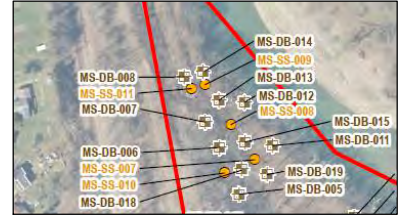
<b>SAMPLE TYPE:</b> <input checked="" type="checkbox"/> Direct Push	<b>GRAPHIC LOG LEGEND:</b> Poorly-graded Gravel with Silt             Silty Sand	<b>ACRONYM LEGEND:</b> amsl = above mean sea level bgs = below ground surface NM = not measured NR = no recovery ppm = parts per million PID = photoionization detector PFAS = per- and polyfluoroalkyl substances SVOCs = semi-volatile organic compounds U.S.C.S. = Unified Soil Classification System VOCs = volatile organic compounds
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**Client:** Arnold & Porter **Project Name:** Hoosick Falls  
**Project Number:** 0378075 **Project Location:** Hoosick Falls, New York

**DRILLING CONTRACTOR:** Parratt Wolff, Inc. **GROUND ELEVATION:** 436.20 feet amsl  
**DATE STARTED:** 12/4/2019 **NORTHING:** 1485909.106  
**DATE COMPLETED:** 12/4/2019 **EASTING:** 799106.4185  
**LOGGED BY:** J. Vause **TOTAL DEPTH:** 3 feet bgs  
**CHECKED BY:** H. Usle **DIAMETER:** 2.5 inches  
**DRILLING METHOD(S):** Geoprobe 7720DT (Track)  
**DATUM:** North American Datum 1983 State Plane New York East in US Survey Feet.  
**NOTES:** SVOCs delineation boring in the vicinity of MS-SS-007, -008, and -010.



DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
2.5	433.7	DP	MS-DB-006 (0-1) collected for SVOCs	36	100	SM		Dark Brown, SILTY FINE SAND, some subangular fine gravel, loose, moist.	0.0
								Medium Brown, SILT AND FINE SAND, some subangular medium gravel, loose, damp.	0.0
			MS-DB-006 (2-3) collected for SVOCs					Gray Brown, SILT AND FINE SAND, some fine to medium gravel, loose, moist.	0.0
5.0	431.2						Bottom of Boring @ 3.0 feet bgs		
7.5	428.7								
10.0	426.2								

**SAMPLE TYPE:**  
 Direct Push

**GRAPHIC LOG LEGEND:**  
 Silty Sand    Poorly-graded Sand with Silt

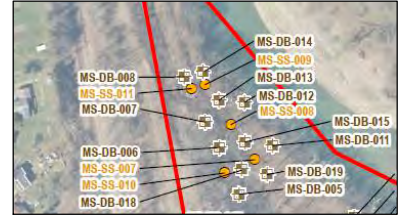
**ACRONYM LEGEND:**  
 amsl = above mean sea level  
 bgs = below ground surface  
 NM = not measured  
 NR = no recovery  
 ppm = parts per million  
 PID = photoionization detector  
 PFAS = per- and polyfluoroalkyl substances  
 SVOCs = semi-volatile organic compounds  
 U.S.C.S. = Unified Soil Classification System  
 VOCs = volatile organic compounds



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**Client:** Arnold & Porter **Project Name:** Hoosick Falls  
**Project Number:** 0378075 **Project Location:** Hoosick Falls, New York

**DRILLING CONTRACTOR:** Parratt Wolff, Inc. **GROUND ELEVATION:** 438.25 feet amsl  
**DATE STARTED:** 12/5/2019 **NORTHING:** 1485957.247  
**DATE COMPLETED:** 12/5/2019 **EASTING:** 799079.6025  
**LOGGED BY:** J. Vause **TOTAL DEPTH:** 3 feet bgs  
**CHECKED BY:** H. Usle **DIAMETER:** 2.5 inches  
**DRILLING METHOD(S):** Geoprobe 7720DT (Track)  
**DATUM:** North American Datum 1983 State Plane New York East in US Survey Feet.  
**NOTES:** SVOCs delineation boring in the vicinity of MS-SS-007, -008, and -010.



DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
2.5	435.8	DP	MS-DB-007 (0-1) collected for SVOCs	36	100	SM	0.6	Black, SILTY FINE SAND, and organics, brick fragments, loose, damp.	0.0
	SM					1.8	Medium Brown, SILTY FINE SAND, and fine to medium gravel, few brick fragments, loose, damp.	0.0	
			CL-ML			3.0	Orange Brown, CLAYEY SILT, some fine sand, few lithic phyllite clasts, plastic, moist.	0.0	
5.0	433.3							Bottom of Boring @ 3.0 feet bgs	
7.5	430.8								
10.0	428.3								

**SAMPLE TYPE:**  
 Direct Push

**GRAPHIC LOG LEGEND:**  
 Silty Sand     Silty Clay

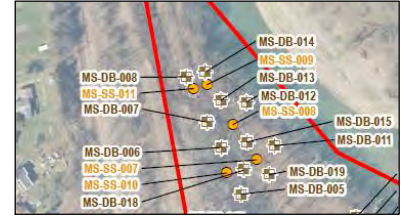
**ACRONYM LEGEND:**  
 amsl = above mean sea level  
 bgs = below ground surface  
 NM = not measured  
 NR = no recovery  
 ppm = parts per million  
 PID = photoionization detector  
 PFAS = per- and polyfluoroalkyl substances  
 SVOCs = semi-volatile organic compounds  
 U.S.C.S. = Unified Soil Classification System  
 VOCs = volatile organic compounds



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**Client:** Arnold & Porter **Project Name:** Hoosick Falls  
**Project Number:** 0378075 **Project Location:** Hoosick Falls, New York

**DRILLING CONTRACTOR:** Parratt Wolff, Inc. **GROUND ELEVATION:** 436.45 feet amsl  
**DATE STARTED:** 12/5/2019 **NORTHING:** 1486026.9531  
**DATE COMPLETED:** 12/5/2019 **EASTING:** 799047.4576  
**LOGGED BY:** J. Vause **TOTAL DEPTH:** 3 feet bgs  
**CHECKED BY:** H. Usle **DIAMETER:** 2.5 inches  
**DRILLING METHOD(S):** Geoprobe 7720DT (Track)  
**DATUM:** North American Datum 1983 State Plane New York East in US Survey Feet.  
**NOTES:** Metals delineation boring in the vicinity of MS-SS-009.



DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)			
2.5	434.0	DP	MS-DB-008 (0-1) collected for Metals	36	100	SM		Black, FINE SILTY SAND, and organics, "slag-like" material, loose, moist.	0.0			
								1.3	SM		Medium Brown, SILTY FINE SAND, and fine to coarse gravel, oxidation, cohesive, moist.	0.0
								2.0	SP		Medium Brown, MEDIUM SAND, and fine to coarse gravel, loose, damp to moist.	0.0
			MS-DB-008 (2-3) collected for Metals			CL-ML		2.3 Medium Brown, MEDIUM SAND, and fine to coarse gravel, loose, damp to moist.	0.0			
				3.0	Light Brown, CLAYEY SILT, and fine sand, some fine to coarse gravel, firm, damp.							
5.0	431.5							Bottom of Boring @ 3.0 feet bgs				
7.5	429.0											
10.0	426.5											

**SAMPLE TYPE:**  
 Direct Push

**GRAPHIC LOG LEGEND:**  
 Silty Sand   
 Poorly-graded Gravelly Sand   
 Silty Clay

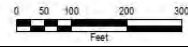
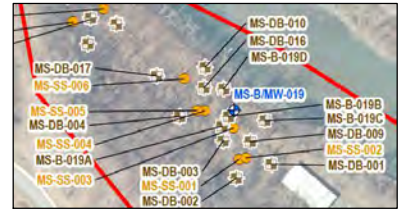
**ACRONYM LEGEND:**  
 amsl = above mean sea level  
 bgs = below ground surface  
 NM = not measured  
 NR = no recovery  
 ppm = parts per million  
 PID = photoionization detector  
 PFAS = per- and polyfluoroalkyl substances  
 SVOCs = semi-volatile organic compounds  
 U.S.C.S. = Unified Soil Classification System  
 VOCs = volatile organic compounds



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**Client:** Arnold & Porter **Project Name:** Hoosick Falls  
**Project Number:** 0378075 **Project Location:** Hoosick Falls, New York

**DRILLING CONTRACTOR:** Parratt Wolff, Inc. **GROUND ELEVATION:** 437.52 feet amsl  
**DATE STARTED:** 12/5/2019 **NORTHING:** 1485638.6714  
**DATE COMPLETED:** 12/5/2019 **EASTING:** 799447.6993  
**LOGGED BY:** J. Vause **TOTAL DEPTH:** 3 feet bgs  
**CHECKED BY:** H. Usle **DIAMETER:** 2.5 inches  
**DRILLING METHOD(S):** Geoprobe 7720DT (Track)  
**DATUM:** North American Datum 1983 State Plane New York East in US Survey Feet.  
**NOTES:** Metals delineation boring in the vicinity of MS-SS-001, -002, and -003.



DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
2.5	435.0	DP	MS-DB-009 (0-1) collected for PFAS and Metals	36	100	SM		Dark Brown, SILTY FINE SAND, and organics, some fine to medium gravel, loose, moist.	0.0
								Light Brown, SILTY FINE SAND, and fine to medium gravel, cohesive, moist.	0.0
								Gray To Black, SANDY GRAVEL, subangular poorly sorted, loose, moist.	0.0
5.0	432.5		MS-DB-009 (2-3) collected for PFAS and Metals						
7.5	430.0								
10.0	427.5							Bottom of Boring @ 3.0 feet bgs	

**SAMPLE TYPE:**  
 Direct Push

**GRAPHIC LOG LEGEND:**  
 Silty Sand     Poorly-graded Sandy Gravel

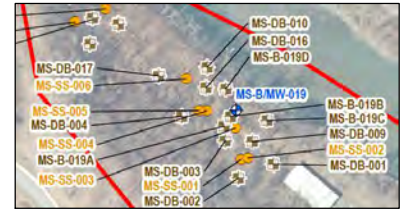
**ACRONYM LEGEND:**  
 amsl = above mean sea level  
 bgs = below ground surface  
 NM = not measured  
 NR = no recovery  
 ppm = parts per million  
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 PFAS = per- and polyfluoroalkyl substances  
 SVOCs = semi-volatile organic compounds  
 U.S.C.S. = Unified Soil Classification System  
 VOCs = volatile organic compounds



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**Client:** Arnold & Porter **Project Name:** Hoosick Falls  
**Project Number:** 0378075 **Project Location:** Hoosick Falls, New York

**DRILLING CONTRACTOR:** Parratt Wolff, Inc. **GROUND ELEVATION:** 421.05 feet amsl  
**DATE STARTED:** 12/5/2019 **NORTHING:** 1485776.8695  
**DATE COMPLETED:** 12/5/2019 **EASTING:** 799362.8304  
**LOGGED BY:** J. Vause **TOTAL DEPTH:** 3 feet bgs  
**CHECKED BY:** H. Usle **DIAMETER:** 2.5 inches  
**DRILLING METHOD(S):** Hand Auger  
**DATUM:** North American Datum 1983 State Plane New York East in US Survey Feet.  
**NOTES:** Metals and SVOCs delineation boring in the vicinity of MS-SS-004, -005, and -006.



DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
		HA	MS-DB-010 (0-1) collected for SVOCs and Metals	36	100	ML	1.0	Light To Dark Brown, SILT AND ORGANICS, few fine gravel, soft, damp.	0.4
		HA				ML	2.0	Dark Brown, GRAVELLY SILT, trace organics, loose, damp.	1.8
2.5	418.6	HA	MS-DB-010 (2-3) collected for SVOCs and Metals			ML	3.0	Dark Brown, FINE SANDY SILT, some fine gravel, trace brick fragments, loose, damp to moist.	0.0
5.0	416.1							Bottom of Boring @ 3.0 feet bgs	
7.5	413.6								
10.0	411.1								

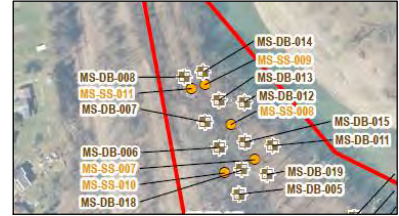
<p><b>SAMPLE TYPE:</b></p> <p> Hand Auger</p>	<p><b>GRAPHIC LOG LEGEND:</b></p> <p> Silt       Gravelly Silt       Sandy Silt</p>	<p><b>ACRONYM LEGEND:</b></p> <p>amsl = above mean sea level bgs = below ground surface NM = not measured NR = no recovery ppm = parts per million PID = photoionization detector PFAS = per- and polyfluoroalkyl substances SVOCs = semi-volatile organic compounds U.S.C.S. = Unified Soil Classification System VOCs = volatile organic compounds</p>
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**Client:** Arnold & Porter **Project Name:** Hoosick Falls  
**Project Number:** 0378075 **Project Location:** Hoosick Falls, New York

**DRILLING CONTRACTOR:** Parratt Wolf, Inc. **GROUND ELEVATION:** 419.58 feet amsl  
**DATE STARTED:** 12/5/2019 **NORTHING:** 1485912.8418  
**DATE COMPLETED:** 12/5/2019 **EASTING:** 799207.6125  
**LOGGED BY:** J. Vause **TOTAL DEPTH:** 3 feet bgs  
**CHECKED BY:** H. Usle **DIAMETER:** 2.5 inches  
**DRILLING METHOD(S):** Hand Auger  
**DATUM:** North American Datum 1983 State Plane New York East in US Survey Feet.  
**NOTES:** SVOCs delineation boring in the vicinity of MS-SS-007, -008, and -010.



DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
		HA	MS-DB-011 (0-1) collected for SVOCs	36	100	SM	[Dotted pattern]	Dark Brown, FINE SANDY SILT, and organics, few medium gravel, soft, damp.	0.1
		HA						2.0	0.0
2.5	417.1	HA	MS-DB-011 (2-3) collected for SVOCs			SM	[Dotted pattern]	Dark Brown, FINE SANDY SILT, and subangular fine to medium gravel, soft, moist.	0.0
								Bottom of Boring @ 3.0 feet bgs	
5.0	414.6								
7.5	412.1								
10.0	409.6								

<b>SAMPLE TYPE:</b> Hand Auger	<b>GRAPHIC LOG LEGEND:</b> Sandy Silt	<b>ACRONYM LEGEND:</b> amsl = above mean sea level bgs = below ground surface NM = not measured NR = no recovery ppm = parts per million PID = photoionization detector PFAS = per- and polyfluoroalkyl substances SVOCs = semi-volatile organic compounds U.S.C.S. = Unified Soil Classification System VOCs = volatile organic compounds
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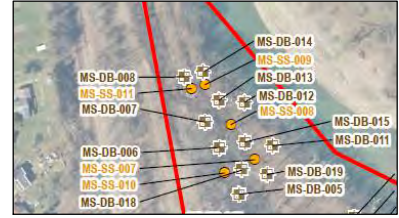




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**Client:** Arnold & Porter **Project Name:** Hoosick Falls  
**Project Number:** 0378075 **Project Location:** Hoosick Falls, New York

**DRILLING CONTRACTOR:** Parratt Wolf, Inc. **GROUND ELEVATION:** 446.18 feet amsl  
**DATE STARTED:** 12/5/2019 **NORTHING:** 1485994.8889  
**DATE COMPLETED:** 12/5/2019 **EASTING:** 799153.7416  
**LOGGED BY:** J. Vause **TOTAL DEPTH:** 3 feet bgs  
**CHECKED BY:** H. Usle **DIAMETER:** 2.5 inches  
**DRILLING METHOD(S):** Hand Auger  
**DATUM:** North American Datum 1983 State Plane New York East in US Survey Feet.  
**NOTES:** SVOCs delineation boring in the vicinity of MS-SS-007, -008, and -010.



DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
2.5	443.7	HA	MS-DB-012 (0-1) collected for SVOCs	36	100	ML		Dark Brown, FINE SANDY SILT, and organics, some fine to coarse subrounded gravel, soft, damp.	0.0
		HA						Dark Brown, FINE SANDY SILT, and subangular fine to coarse gravel, soft, damp.	0.0
		HA	MS-DB-012 (2-3) collected for SVOCs			ML		Dark Brown, FINE SANDY SILT, and subangular fine to coarse gravel, soft, damp.	0.0
5.0	441.2							Bottom of Boring @ 3.0 feet bgs	
7.5	438.7								
10.0	436.2								

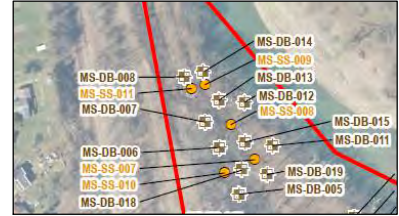
<b>SAMPLE TYPE:</b> Hand Auger	<b>GRAPHIC LOG LEGEND:</b> Sandy Silt	<b>ACRONYM LEGEND:</b> amsl = above mean sea level bgs = below ground surface NM = not measured NR = no recovery ppm = parts per million PID = photoionization detector PFAS = per- and polyfluoroalkyl substances SVOCs = semi-volatile organic compounds U.S.C.S. = Unified Soil Classification System VOCs = volatile organic compounds
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**Client:** Arnold & Porter **Project Name:** Hoosick Falls  
**Project Number:** 0378075 **Project Location:** Hoosick Falls, New York

**DRILLING CONTRACTOR:** Parratt Wolf, Inc. **GROUND ELEVATION:** 432.12 feet amsl  
**DATE STARTED:** 12/5/2019 **NORTHING:** 1485999.095  
**DATE COMPLETED:** 12/5/2019 **EASTING:** 799105.5806  
**LOGGED BY:** J. Vause **TOTAL DEPTH:** 3 feet bgs  
**CHECKED BY:** H. Usle **DIAMETER:** 2.5 inches  
**DRILLING METHOD(S):** Hand Auger  
**DATUM:** North American Datum 1983 State Plane New York East in US Survey Feet.  
**NOTES:** Metals and SVOCs delineation boring in the vicinity of MS-SS-009.



DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
		HA	MS-DB-013 (0-1) collected for SVOCs and Metals	36	100	ML		Dark Brown, SILT, and subangular and subrounded fine to medium gravel, some fine sand and organics, soft, damp.	0.0
		HA						Dark Brown, FINE SANDY SILT, and organics, some fine to medium subrounded gravel, soft, damp.	0.0
2.5	429.6	HA	MS-DB-013 (2-3) collected for SVOCs and Metals			CL-ML		Light Brown, CLAYEY SILT, with coarse sand and fine gravel, poorly sorted, soft, moist.	0.0
5.0	427.1							Bottom of Boring @ 3.0 feet bgs	
7.5	424.6								
10.0	422.1								

<b>SAMPLE TYPE:</b> Hand Auger	<b>GRAPHIC LOG LEGEND:</b> Gravelly Silt             Sandy Silt             Silty Clay	<b>ACRONYM LEGEND:</b> amsl = above mean sea level bgs = below ground surface NM = not measured NR = no recovery ppm = parts per million PID = photoionization detector PFAS = per- and polyfluoroalkyl substances SVOCs = semi-volatile organic compounds U.S.C.S. = Unified Soil Classification System VOCs = volatile organic compounds
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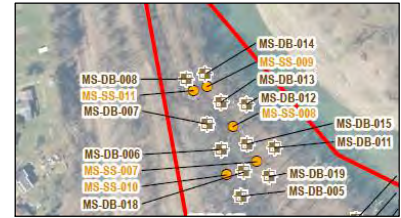


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Client: Arnold & Porter Project Name: Hoosick Falls

Project Number: 0378075 Project Location: Hoosick Falls, New York

DRILLING CONTRACTOR: Parratt Wolf, Inc. GROUND ELEVATION: 421.64 feet amsl  
DATE STARTED: 12/5/2019 NORTHING: 1486043.101  
DATE COMPLETED: 12/5/2019 EASTING: 799082.1336  
LOGGED BY: J. Vause TOTAL DEPTH: 3 feet bgs  
CHECKED BY: H. Usle DIAMETER: 2.5 inches  
DRILLING METHOD(S): Hand Auger  
DATUM: North American Datum 1983 State Plane New York East in US Survey Feet.  
NOTES: Metals delineation boring in the vicinity of MS-SS-009.



DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
		HA	MS-DB-014 (0-1) collected for Metals	36	100	ML		Dark Brown, SILT AND ORGANICS, some subrounded fine to medium gravel, soft, damp.	0.0
		HA							0.0
2.5	419.1	HA	MS-DB-014 (2-3) collected for Metals			SM	.....	Dark Brown, FINE SILTY SAND, and fine to medium gravel, loose, damp.	0.0
								Bottom of Boring @ 3.0 feet bgs	
5.0	416.6								
7.5	414.1								
10.0	411.6								

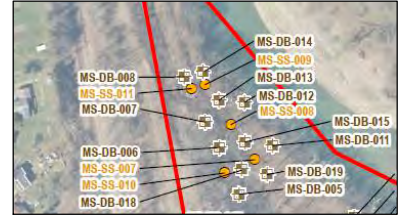
<b>SAMPLE TYPE:</b> Hand Auger		<b>GRAPHIC LOG LEGEND:</b> Silt       Silty Sand		<b>ACRONYM LEGEND:</b> amsl = above mean sea level bgs = below ground surface NM = not measured NR = no recovery ppm = parts per million PID = photoionization detector PFAS = per- and polyfluoroalkyl substances SVOCs = semi-volatile organic compounds U.S.C.S. = Unified Soil Classification System VOCs = volatile organic compounds	
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**Client:** Arnold & Porter **Project Name:** Hoosick Falls  
**Project Number:** 0378075 **Project Location:** Hoosick Falls, New York

**DRILLING CONTRACTOR:** Parratt Wolf, Inc. **GROUND ELEVATION:** 433.29 feet amsl  
**DATE STARTED:** 12/5/2019 **NORTHING:** 1485919.5229  
**DATE COMPLETED:** 12/5/2019 **EASTING:** 799155.2315  
**LOGGED BY:** J. Vause **TOTAL DEPTH:** 3 feet bgs  
**CHECKED BY:** H. Usle **DIAMETER:** 2.5 inches  
**DRILLING METHOD(S):** Hand Auger  
**DATUM:** North American Datum 1983 State Plane New York East in US Survey Feet.  
**NOTES:** SVOCs delineation boring in the vicinity of MS-SS-007, -008, and -010.



DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
		HA	MS-DB-015 (0-1) collected for SVOCs	36	100	ML		Dark Brown, FINE SANDY SILT, and organics, few fine subrounded gravel, soft, moist.	0.0
		HA						Light Brown, CLAYEY SILT, and fine sand, few organics, plastic, moist to wet.	0.0
2.5	430.8	HA	MS-DB-015 (2-3) collected for SVOCs			CL-ML			0.0
								Bottom of Boring @ 3.0 feet bgs	
5.0	428.3								
7.5	425.8								
10.0	423.3								

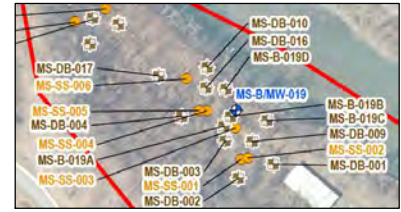
<b>SAMPLE TYPE:</b> Hand Auger	<b>GRAPHIC LOG LEGEND:</b> Sandy Silt      Silty Clay	<b>ACRONYM LEGEND:</b> amsl = above mean sea level bgs = below ground surface NM = not measured NR = no recovery ppm = parts per million PID = photoionization detector PFAS = per- and polyfluoroalkyl substances SVOCs = semi-volatile organic compounds U.S.C.S. = Unified Soil Classification System VOCs = volatile organic compounds
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**Client:** Arnold & Porter **Project Name:** Hoosick Falls  
**Project Number:** 0378075 **Project Location:** Hoosick Falls, New York

**DRILLING CONTRACTOR:** Parratt Wolf, Inc. **GROUND ELEVATION:** 466.41 feet amsl  
**DATE STARTED:** 12/5/2019 **NORTHING:** 1485739.0765  
**DATE COMPLETED:** 12/5/2019 **EASTING:** 799360.9844  
**LOGGED BY:** J. Vause **TOTAL DEPTH:** 3 feet bgs  
**CHECKED BY:** H. Usle **DIAMETER:** 2.5 inches  
**DRILLING METHOD(S):** Hand Auger  
**DATUM:** North American Datum 1983 State Plane New York East in US Survey Feet.  
**NOTES:** Metals and SVOCs delineation boring in the vicinity of MS-SS-004, -005, and -006.



DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
		HA	MS-DB-016 (0-1) collected for SVOCs and Metals	36	100	CL-ML		Red Brown, SANDY SILT AND CLAY, some fine gravel and organics, some root material, poorly sorted, weakly plastic, moist.	0.0
		HA							0.0
2.5	463.9	HA	MS-DB-016 (2-3) collected for SVOCs and Metals			ML		Light Brown, FINE SANDY SILT, few clay and fine gravel, weakly plastic, moist to wet.	0.0
		HA							0.0
5.0	461.4							Bottom of Boring @ 3.0 feet bgs	
7.5	458.9								
10.0	456.4								

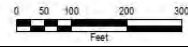
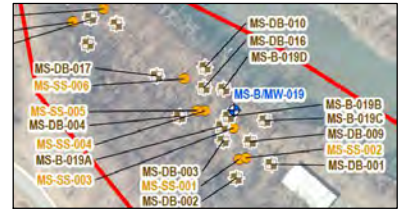
<b>SAMPLE TYPE:</b> Hand Auger	<b>GRAPHIC LOG LEGEND:</b> Silty Clay      Sandy Silt	<b>ACRONYM LEGEND:</b> amsl = above mean sea level bgs = below ground surface NM = not measured NR = no recovery ppm = parts per million PID = photoionization detector PFAS = per- and polyfluoroalkyl substances SVOCs = semi-volatile organic compounds U.S.C.S. = Unified Soil Classification System VOCs = volatile organic compounds
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Telephone: +1 (631) 756-8900

**Client:** Arnold & Porter **Project Name:** Hoosick Falls  
**Project Number:** 0378075 **Project Location:** Hoosick Falls, New York

**DRILLING CONTRACTOR:** Parratt Wolf, Inc. **GROUND ELEVATION:** 441.02 feet amsl  
**DATE STARTED:** 12/5/2019 **NORTHING:** 1485760.8167  
**DATE COMPLETED:** 12/5/2019 **EASTING:** 799272.4024  
**LOGGED BY:** J. Vause **TOTAL DEPTH:** 3 feet bgs  
**CHECKED BY:** H. Usle **DIAMETER:** 2.5 inches  
**DRILLING METHOD(S):** Hand Auger  
**DATUM:** North American Datum 1983 State Plane New York East in US Survey Feet.  
**NOTES:** Metals and SVOCs delineation boring in the vicinity of MS-SS-004, -005, and -006.



DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
2.5	438.5	HA	MS-DB-017 (0-1) collected for SVOCs and Metals	36	100	ML		Dark Brown, SANDY SILT, some clay and organics, few fine gravel, soft, moist.	0.0
		HA							0.0
		HA	MS-DB-017 (2-3) collected for SVOCs and Metals					SM	2.0
5.0	436.0								
7.5	433.5								
10.0	431.0							Bottom of Boring @ 3.0 feet bgs	

<b>SAMPLE TYPE:</b> Hand Auger	<b>GRAPHIC LOG LEGEND:</b> Sandy Silt     Silty Sand	<b>ACRONYM LEGEND:</b> amsl = above mean sea level bgs = below ground surface NM = not measured NR = no recovery ppm = parts per million PID = photoionization detector PFAS = per- and polyfluoroalkyl substances SVOCs = semi-volatile organic compounds U.S.C.S. = Unified Soil Classification System VOCs = volatile organic compounds
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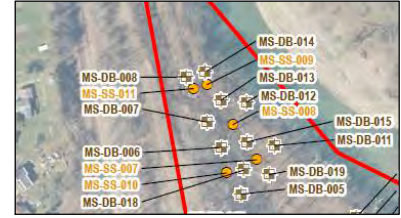


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Client: Arnold & Porter Project Name: Hoosick Falls

Project Number: 0378075 Project Location: Hoosick Falls, New York

DRILLING CONTRACTOR: Parratt Wolf, Inc. GROUND ELEVATION: 469.34 feet amsl  
 DATE STARTED: 12/5/2019 NORTHING: 1485863.1219  
 DATE COMPLETED: 12/5/2019 EASTING: 799131.6395  
 LOGGED BY: J. Vause TOTAL DEPTH: 3 feet bgs  
 CHECKED BY: H. Usle DIAMETER: 2.5 inches  
 DRILLING METHOD(S): Hand Auger  
 DATUM: North American Datum 1983 State Plane New York East in US Survey Feet.  
 NOTES: SVOCs delineation boring in the vicinity of MS-SS-007, -008, and -010.



DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
		HA	MS-DB-018 (0-1) collected for SVOCs	36	100	ML	1.0	Dark Brown, SANDY SILT, and organics, and fine gravel, poorly sorted, soft, moist.	0.0
		HA				CL-ML	2.0	Medium Brown, CLAYEY SILT, and fine sand, few fine to medium gravel, trace brick fragments, soft, moist to wet.	0.0
2.5	466.8	HA	MS-DB-018 (2-3) collected for SVOCs			CL-ML	3.0	Medium Brown, CLAYEY SILT, and fine sand, few fine to medium gravel, weakly plastic, wet.	0.0
5.0	464.3							<i>Bottom of Boring @ 3.0 feet bgs</i>	
7.5	461.8								
10.0	459.3								

<b>SAMPLE TYPE:</b> Hand Auger	<b>GRAPHIC LOG LEGEND:</b> Sandy Silt      Silty Clay	<b>ACRONYM LEGEND:</b> amsl = above mean sea level bgs = below ground surface NM = not measured NR = no recovery ppm = parts per million PID = photoionization detector PFAS = per- and polyfluoroalkyl substances SVOCs = semi-volatile organic compounds U.S.C.S. = Unified Soil Classification System VOCs = volatile organic compounds
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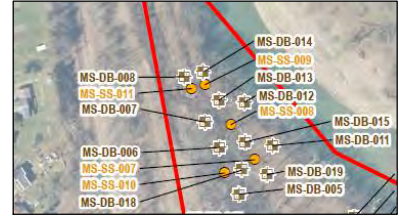


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Client: Arnold & Porter Project Name: Hoosick Falls

Project Number: 0378075 Project Location: Hoosick Falls, New York

DRILLING CONTRACTOR: Parratt Wolf, Inc. GROUND ELEVATION: 433.01 feet amsl  
 DATE STARTED: 12/5/2019 NORTHING: 1485857.9978  
 DATE COMPLETED: 12/5/2019 EASTING: 799197.4755  
 LOGGED BY: J. Vause TOTAL DEPTH: 3 feet bgs  
 CHECKED BY: H. Usle DIAMETER: 2.5 inches  
 DRILLING METHOD(S): Hand Auger  
 DATUM: North American Datum 1983 State Plane New York East in US Survey Feet.  
 NOTES: SVOCs delineation boring in the vicinity of MS-SS-007, -008, and -010.



DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
		HA	MS-DB-019 (0-1) collected for SVOCs	36	100	ML		Dark Brown, SANDY SILT, and organics, few fine gravel, loose, moist.	0.0
		HA				CL-ML		Medium Brown, CLAYEY SILT, and fine sand, few fine to medium gravel, soft, moist to wet.	0.0
2.5	430.5	HA	MS-DB-019 (2-3) collected for SVOCs			CL-ML		Medium Brown, CLAYEY SILT, and fine sand, few fine to medium gravel, weakly plastic, wet.	0.0
5.0	428.0							Bottom of Boring @ 3.0 feet bgs	
7.5	425.5								
10.0	423.0								

<b>SAMPLE TYPE:</b> Hand Auger	<b>GRAPHIC LOG LEGEND:</b> Sandy Silt     Silty Clay	<b>ACRONYM LEGEND:</b> amsl = above mean sea level bgs = below ground surface NM = not measured NR = no recovery ppm = parts per million PID = photoionization detector PFAS = per- and polyfluoroalkyl substances SVOCs = semi-volatile organic compounds U.S.C.S. = Unified Soil Classification System VOCs = volatile organic compounds
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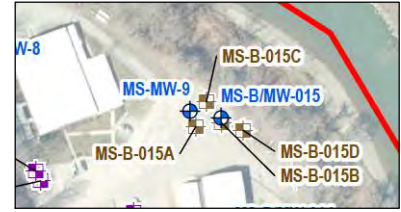




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**Client:** Arnold & Porter **Project Name:** Hoosick Falls  
**Project Number:** 0378075 **Project Location:** Hoosick Falls, New York

**DRILLING CONTRACTOR:** Parratt Wolf, Inc. **GROUND ELEVATION:** 425.76 feet amsl  
**DATE STARTED:** 12/3/2019 **NORTHING:** 1485256.2603  
**DATE COMPLETED:** 12/3/2019 **EASTING:** 800002.605  
**LOGGED BY:** J. Vause **TOTAL DEPTH:** 12 feet bgs  
**CHECKED BY:** H. Usle **DIAMETER:** 2.5 inches  
**DRILLING METHOD(S):** Geoprobe 7720DT (Track)  
**DATUM:** North American Datum 1983 State Plane New York East in US Survey Feet.  
**NOTES:** Soil samples collected as part of metals and metals delineation. Location is west of MS-MW-015.



DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
						GW		Dark Brown, FINE TO MEDIUM GRAVEL, few subrounded sand, poorly sorted, loose, damp.	0.0
		DP		34	71	SP		Medium Brown, FINE SAND, some fine gravel, dry.	0.0
						GP-GM		Black, MEDIUM GRAVEL, and subrounded silt, damp to moist.	0.0
5	421					SM		Medium Brown, SILTY COARSE SAND, and fine gravel, brick fragments, dense.	0.0
		DP	MS-B-015A (7-8) collected for Metals	36	75	SP		Light Brown, FINE TO MEDIUM SAND, brick fragments.	0.0
						SM		Medium Brown, SILTY FINE SAND, some fine gravel, moist.	0.0
10	416	DP	MS-B-015A (11-12) collected for Metals	31	65	SM		Black, SILTY FINE SAND, dense, moist, orange mottling.	0.0
						SP		Light Brown, COARSE SAND, moist.	0.0
15	411							Bottom of Boring @ 12.0 feet bgs	

**SAMPLE TYPE:**  
 Direct Push

**GRAPHIC LOG LEGEND:**  
 Well-Graded Gravel  
 Poorly-graded Sand  
 Poorly-graded Gravel with Silt  
 Silty Sand

**ACRONYM LEGEND:**  
amsl = above mean sea level  
bgs = below ground surface  
NM = not measured  
NR = no recovery  
ppm = parts per million  
PID = photoionization detector  
PFAS = per- and polyfluoroalkyl substances  
SVOCs = semi-volatile organic compounds  
U.S.C.S. = Unified Soil Classification System  
VOCs = volatile organic compounds



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Client: Arnold & Porter

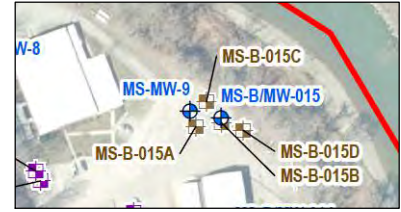
Project Name: Hoosick Falls

Project Number: 0378075

Project Location: Hoosick Falls, New York

DRILLING CONTRACTOR: Parratt Wolf, Inc.  
DATE STARTED: 12/3/2019  
DATE COMPLETED: 12/3/2019  
LOGGED BY: K. Warner  
CHECKED BY: H. Usle  
DRILLING METHOD(S): Geoprobe 7720DT (Track)  
DATUM: North American Datum 1983 State Plane New York East in US Survey Feet.  
NOTES: Soil samples collected as part of metals and metals delineation. Location is south of MS-MW-015.

GROUND ELEVATION: 425.98 feet amsl  
NORTHING: 1485261.6323  
EASTING: 800036.3  
TOTAL DEPTH: 12 feet bgs  
DIAMETER: 2.5 inches



DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
0.2							█	Black, ASPHALT.	
1.0				30	63	GP		Dark Gray To Black, COARSE SANDY GRAVEL, subangular (0.5-1" diameter), well sorted, loose, dry.	0.0
2.0		DP				SM		Dark Brown, SILTY SAND, with subangular to subrounded gravel, (0.5" diameter), cohesive, poorly sorted, soft to firm, moist.	0.0
3.0						CL-ML		Dark Brown To Gray, CLAYEY SILT, with subangular to subrounded gravel, (0.5" diameter), poorly sorted, firm, cohesive, moist.	0.0
4.0						CL-ML		Dark Brown To Gray, CLAYEY SILT, with subangular gravel, (0.5-2" diameter), brick fragment at 3 feet bgs, poorly sorted, firm, cohesive, moist.	0.0
5.0	421			20	42	GP		Dark Brown To Red Brown, COARSE SANDY GRAVEL, subangular (0.5-2" diameter), brick fragments, moderately sorted, loose, moist.	0.0
6.0		DP				SP		Light Gray To Brown, FINE SAND, some subangular gravel, (0.5" diameter), moderately sorted, cohesive, wet.	0.0
7.0						OL		Dark Brown, PEAT, with organics, two large gravel fragments (1" diameter), poorly sorted, soft, moist.	0.0
8.0						CL-ML		Light Brown To Dark Brown, CLAYEY SILT, with subangular to subrounded gravel, (0.5" diameter), poorly sorted, firm, cohesive, moist.	0.0
9.5				36	75	CL		Light Brown To Reddish Brown, FINE SANDY CLAY, with subangular gravel, (0.5" diameter), wood fragment at 9 feet bgs, poorly sorted, firm, cohesive, moist to wet, mottling.	1.3
10.0	416	DP				SW		Light Brown, FINE SAND, layering, well sorted, brittle, dry.	2.7
10.5						SM		Orange Red, FINE SANDY SILT, trace subangular gravel, (0.5" diameter), moderately sorted, firm, cohesive, moist.	0.1
12.0	411		MS-B-015B (11-12) collected for Metals			SM		Dark Grayish Brown, FINE SANDY SILT, with subangular to subrounded gravel, (0.5" diameter), coal fragment at 11.5 feet bgs, poorly sorted, cohesive, moist.	0.0
Bottom of Boring @ 12.0 feet bgs									

SAMPLE TYPE:  
 Direct Push

GRAPHIC LOG LEGEND:  
 Asphalt  
 Silty Clay  
 Poorly-graded Gravel  
 Poorly-graded Silty Sand  
 Silty Sand  
 Poorly-graded Sandy Gravel  
 Poorly-graded Sand

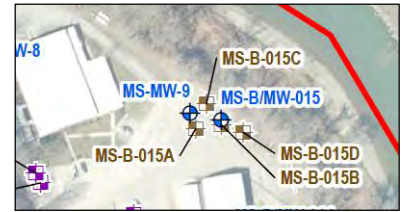
ACRONYM LEGEND:  
amsl = above mean sea level  
bgs = below ground surface  
NM = not measured  
NR = no recovery  
ppm = parts per million  
PID = photoionization detector  
PFAS = per- and polyfluoroalkyl substances  
SVOCs = semi-volatile organic compounds  
U.S.C.S. = Unified Soil Classification System  
VOCs = volatile organic compounds



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Client: Arnold & Porter Project Name: Hoosick Falls  
Project Number: 0378075 Project Location: Hoosick Falls, New York

DRILLING CONTRACTOR: Parratt Wolf, Inc. GROUND ELEVATION: 424.66 feet amsl  
DATE STARTED: 12/3/2019 NORTHING: 1485288.9543  
DATE COMPLETED: 12/3/2019 EASTING: 800016.602  
LOGGED BY: K. Warner TOTAL DEPTH: 12 feet bgs  
CHECKED BY: H. Usle DIAMETER: 2.5 inches  
DRILLING METHOD(S): Geoprobe 7720DT (Track)  
DATUM: North American Datum 1983 State Plane New York East in US Survey Feet.  
NOTES: Soil samples collected as part of metals and metals delineation. Location is north of MS-MW-015.



DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
							0.2	Black, ASPHALT.	
						GP	0.2 - 1.0	Black, GRAVEL, subangular (0.5" diameter), well sorted, loose, moist.	0.0
		DP		28	58	SM	1.0 - 3.0	Brown And Gray, SILTY SAND, trace angular gravel, (0.5" diameter), moderately sorted, firm, cohesive, moist.	0.0
						SM	3.0 - 4.0	Dark Gray To Brown, FINE SANDY SILT, trace subrounded gravel, (0.5-1" diameter), wood fragments, moderately sorted, firm, cohesive, moist.	0.0
5	420					SM	4.0 - 5.5	Dark Brown To Brown, SILTY FINE SAND, trace subangular gravel, (0.5" diameter), well sorted, loose, moist.	0.0
		DP	MS-B-015C (7-8) collected for Metals	37	77	CL-ML	5.5 - 6.0	Brown To Gray, SILTY CLAY, well sorted, low plasticity, moist.	0.0
						SP	6.0 - 8.0	Dark Brown, FINE SAND, subangular (0.5" diameter), well sorted, loose, moist.	0.0
						SP	8.0 - 10.0	Dark Brown, FINE SAND, some subangular gravel, (0.5" diameter), moderately sorted, loose to medium dense, moist.	0.0
10	415	DP		36	75	SM	10.0 - 11.0	Brown To Gray, SANDY SILT, some subangular gravel, (0.5" diameter), moderately sorted, firm, cohesive, wet.	0.0
			MS-B-015C (11-12) collected for Metals			CL-ML	11.0 - 12.0	Dark Brown To Red Brown, SILTY CLAY, with gravel, (0.5" diameter), moderately sorted, medium plasticity, wet.	0.0
15	410							Bottom of Boring @ 12.0 feet bgs	

SAMPLE TYPE:  
☒ Direct Push

GRAPHIC LOG LEGEND:  
 ■ Asphalt  
 □ Poorly-graded Gravel  
 □ Silty Sand  
 □ Silty Clay  
 □ Poorly-graded Sand

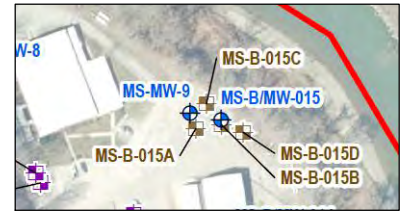
ACRONYM LEGEND:  
 amsl = above mean sea level  
 bgs = below ground surface  
 NM = not measured  
 NR = no recovery  
 ppm = parts per million  
 PID = photoionization detector  
 PFAS = per- and polyfluoroalkyl substances  
 SVOCs = semi-volatile organic compounds  
 U.S.C.S. = Unified Soil Classification System  
 VOCs = volatile organic compounds



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**Client:** Arnold & Porter **Project Name:** Hoosick Falls  
**Project Number:** 0378075 **Project Location:** Hoosick Falls, New York

**DRILLING CONTRACTOR:** Parratt Wolf, Inc. **GROUND ELEVATION:** 426.76 feet amsl  
**DATE STARTED:** 12/4/2019 **NORTHING:** 1485252.0772  
**DATE COMPLETED:** 12/4/2019 **EASTING:** 800064.953  
**LOGGED BY:** J. Vause **TOTAL DEPTH:** 12 feet bgs  
**CHECKED BY:** H. Usle **DIAMETER:** 2.5 inches  
**DRILLING METHOD(S):** Geoprobe 7720DT (Track)  
**DATUM:** North American Datum 1983 State Plane New York East in US Survey Feet.  
**NOTES:** Soil samples collected as part of metals and metals delineation. Location is east of MS-MW-015.



DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
						GP	1.3	Black, ASPHALT, and fine gravel.	0.0
		DP		30	63	SM	2.0	Medium Brown, SILTY COARSE SAND, brick fragments, loose, moist.	0.0
						SC		Dark Brown, CLAYEY COARSE SAND, brick fragments, coal ash, cohesive, damp.	0.0
5	422						5.3		0.0
		DP		34	71	SM		Medium Brown, SILTY FINE SAND, and medium gravel, brick fragments, wood and coal debris, cohesive, damp.	0.0
			MS-B-015D (7-8) collected for Metals			SM		Light Brown, SILTY FINE SAND, and fine gravel, crushed cobble at 7 feet bgs, cohesive, damp.	0.0
							9.0		0.0
10	417	DP		22	46	SP		Black, COARSE SAND, and fine gravel, damp.	0.0
							11.0		0.0
			MS-B-015D (11-12) collected for Metals			SM		Light Brown, SILTY FINE SAND, little coal ash, loose, moist.	0.0
							12.0		0.0
								Bottom of Boring @ 12.0 feet bgs	
15	412								

**SAMPLE TYPE:**  
☒ Direct Push

**GRAPHIC LOG LEGEND:**  
 ■ Asphalt  
 □ Poorly-graded Gravelly Sand  
 □ Silty Sand  
 □ Clayey Sand

**ACRONYM LEGEND:**  
 amsl = above mean sea level  
 bgs = below ground surface  
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 NR = no recovery  
 ppm = parts per million  
 PID = photoionization detector  
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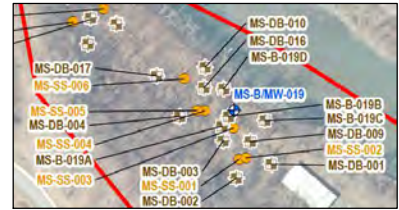


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Client: Arnold & Porter Project Name: Hoosick Falls

Project Number: 0378075 Project Location: Hoosick Falls, New York

DRILLING CONTRACTOR: Parratt Wolf, Inc. GROUND ELEVATION: 441.61 feet amsl  
 DATE STARTED: 12/5/2019 NORTHING: 1485667.2625  
 DATE COMPLETED: 12/5/2019 EASTING: 799394.2503  
 LOGGED BY: J. Vause TOTAL DEPTH: 12 feet bgs  
 CHECKED BY: H. Usle DIAMETER: 2.5 inches  
 DRILLING METHOD(S): Geoprobe 7720DT (Track)  
 DATUM: North American Datum 1983 State Plane New York East in US Survey Feet.  
 NOTES: Soil samples collected as part of metals and SVOCs delineation. Location is west of MS-MW-019.



DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
			MS-B-019A (0-1) collected for SVOCs and PFAS	28	58	ML	0.4	Black, SILT, and organics, soft, damp.	0.0
								1.4	Red, BRICK, and wood fragments.
		DP	MS-B-019A (2-3) collected for SVOCs and Metals			SM		Dark Brown, SILTY FINE SAND, and fine to medium gravel, loose, damp.	0.0
5	437						4.5		0.0
		DP	MS-B-019A (7-8) collected for SVOCs and Metals	36	75	CL-ML		Light Brown, CLAYEY SILT, and fine to coarse gravel, oxidation, firm, moist.	0.0
							8.5		0.0
10	432	DP	MS-B-019A (11-12) collected for SVOCs and Metals	40	83	CL-ML		Light Brown, CLAYEY SILT, some fine gravel, plastic, wet.	0.0
							12.0		0.0
15	427							Bottom of Boring @ 12.0 feet bgs	

SAMPLE TYPE:  
 Direct Push

GRAPHIC LOG LEGEND:  
 Silt       Brick       Silty Sand  
 Silty Clay

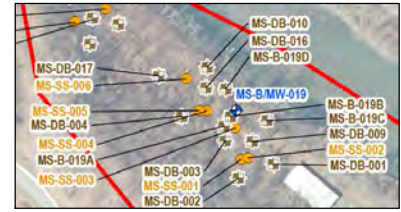
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**Client:** Arnold & Porter **Project Name:** Hoosick Falls  
**Project Number:** 0378075 **Project Location:** Hoosick Falls, New York

**DRILLING CONTRACTOR:** Parratt Wolf, Inc. **GROUND ELEVATION:** 426.59 feet amsl  
**DATE STARTED:** 12/5/2019 **NORTHING:** 1485685.2014  
**DATE COMPLETED:** 12/5/2019 **EASTING:** 799406.8093  
**LOGGED BY:** J. Vause **TOTAL DEPTH:** 12 feet bgs  
**CHECKED BY:** H. Usle **DIAMETER:** 2.5 inches  
**DRILLING METHOD(S):** Geoprobe 7720DT (Track)  
**DATUM:** North American Datum 1983 State Plane New York East in US Survey Feet.  
**NOTES:** Soil samples collected as part of metals and SVOCs delineation. Location is south of MS-MW-019.



DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)	
5	422	DP	MS-B-019B (0-1) collected for SVOCs and Metals	24	50	ML	0.9	Black, SILT, and organics, soft, moist.	0.0	
						2.0	Gray and Red, BRICK, with fine sand, loose, damp.	0.0		
						3.5	Gray, CONCRETE.	0.0		
			ML			5.0	Light Brown, SILT, and organics, crumbled texture, soft, dry.	0.0		
10	417	DP	MS-B-019B (2-3) collected for SVOCs and Metals	30	63	CL-ML		Light Brown, CLAYEY SILT, and fine to coarse gravel, plastic, wet.	0.0	
										0.0
										0.0
15	412	DP	MS-B-019B (11-12) collected for SVOCs and Metals	36	75	CL-ML		Light Brown, CLAYEY SILT, and fine to coarse gravel, plastic, saturated.	0.0	
										0.0
Bottom of Boring @ 12.0 feet bgs										

**SAMPLE TYPE:**  
☒ Direct Push

**GRAPHIC LOG LEGEND:**  
 ☐ Silt      ☒ Brick      ☐ Concrete  
 ☐ Silty Clay

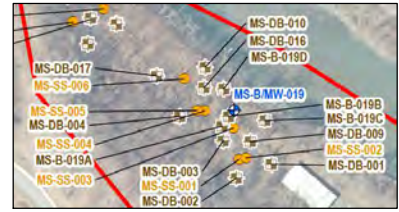
**ACRONYM LEGEND:**  
 amsl = above mean sea level  
 bgs = below ground surface  
 NM = not measured  
 NR = no recovery  
 ppm = parts per million  
 PID = photoionization detector  
 PFAS = per- and polyfluoroalkyl substances  
 SVOCs = semi-volatile organic compounds  
 U.S.C.S. = Unified Soil Classification System  
 VOCs = volatile organic compounds



ERM  
105 Maxess Road; Suite 316  
Melville, New York 11747  
Telephone: +1 (631) 756-8900

**Client:** Arnold & Porter **Project Name:** Hoosick Falls  
**Project Number:** 0378075 **Project Location:** Hoosick Falls, New York

**DRILLING CONTRACTOR:** Parratt Wolf, Inc. **GROUND ELEVATION:** 446.87 feet amsl  
**DATE STARTED:** 12/5/2019 **NORTHING:** 1485677.6113  
**DATE COMPLETED:** 12/5/2019 **EASTING:** 799474.9833  
**LOGGED BY:** J. Vause **TOTAL DEPTH:** 3 feet bgs  
**CHECKED BY:** H. Usle **DIAMETER:** 3.5 inches  
**DRILLING METHOD(S):** Hand Auger  
**DATUM:** North American Datum 1983 State Plane New York East in US Survey Feet.  
**NOTES:** Soil samples collected as part of metals and SVOCs delineation. Location is east of MS-MW-019.



DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
		HA	MS-B-019C (0-1) collected for SVOCs and Metals	36	100	ML		Dark Brown To Black, SILT, and organics, few brick fragments, soft, moist.	0.0
		HA							
2.5	444.4	HA	MS-B-019C (2-3) collected for SVOCs and Metals			CL-ML		Dark Brown, CLAYEY SILT, some fine gravel, soft, damp.	0.0
		HA							
5.0	441.9							Bottom of Boring @ 3.0 feet bgs	
7.5	439.4								
10.0	436.9								

**SAMPLE TYPE:**  
 Hand Auger

**GRAPHIC LOG LEGEND:**  
 Silt      Silty Clay

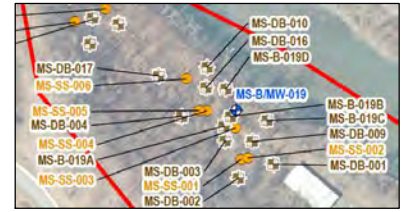
**ACRONYM LEGEND:**  
amsl = above mean sea level  
bgs = below ground surface  
NM = not measured  
NR = no recovery  
ppm = parts per million  
PID = photoionization detector  
PFAS = per- and polyfluoroalkyl substances  
SVOCs = semi-volatile organic compounds  
U.S.C.S. = Unified Soil Classification System  
VOCs = volatile organic compounds



ERM  
105 Maxess Road; Suite 316  
Melville, New York 11747  
Telephone: +1 (631) 756-8900

**Client:** Arnold & Porter **Project Name:** Hoosick Falls  
**Project Number:** 0378075 **Project Location:** Hoosick Falls, New York

**DRILLING CONTRACTOR:** Parratt Wolf, Inc. **GROUND ELEVATION:** 417.91 feet amsl  
**DATE STARTED:** 12/5/2019 **NORTHING:** 1485736.5395  
**DATE COMPLETED:** 12/5/2019 **EASTING:** 799397.8884  
**LOGGED BY:** J. Vause **TOTAL DEPTH:** 3 feet bgs  
**CHECKED BY:** H. Usle **DIAMETER:** 3.5 inches  
**DRILLING METHOD(S):** Hand Auger  
**DATUM:** North American Datum 1983 State Plane New York East in US Survey Feet.  
**NOTES:** Soil samples collected as part of metals and SVOCs delineation. Location is north of MS-MW-019.



DEPTH (feet)	ELEVATION (feet amsl)	SAMPLE TYPE	SOIL SAMPLE NUMBER(S)	RECOVERY (inches)	RECOVERY %	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	PID (ppm)
		HA	MS-B-019D (0-1) collected for SVOCs, PFAS, and Metals	36	100	ML		Black, SILT AND ORGANICS, soft, damp.	0.0
		HA				SM		Dark Brown, FINE SANDY SILT, some subangular and subrounded fine gravel, soft, damp.	0.7
2.5	415.4	HA	MS-B-019D (2-3) collected for SVOCs, PFAS, and Metals			SM		Dark Brown, SILTY FINE SAND, some subangular and subrounded fine gravel, loose, moist.	8.3
5.0	412.9							Bottom of Boring @ 3.0 feet bgs	
7.5	410.4								
10.0	407.9								

**SAMPLE TYPE:**  
 Hand Auger

**GRAPHIC LOG LEGEND:**  
 Silt     
 Sandy Silt     
 Silty Sand

**ACRONYM LEGEND:**  
 amsl = above mean sea level  
 bgs = below ground surface  
 NM = not measured  
 NR = no recovery  
 ppm = parts per million  
 PID = photoionization detector  
 PFAS = per- and polyfluoroalkyl substances  
 SVOCs = semi-volatile organic compounds  
 U.S.C.S. = Unified Soil Classification System  
 VOCs = volatile organic compounds



**APPENDIX C      SC Groundwater Monitoring Well Development and Sampling Records**

B8

# WELL DEVELOPMENT DATA SHEET

Well Number: MS-MW-18-2008 Date: 4/2/19

Project Name: HF-Mechanic St. Project Number: 0378075.04

Weather Conditions: 51°F, clear, calm

Development Technique

Dual Air Lift

Static water level before development: 22.79 (feet below top of casing)  
Bottom of well: 55.77 (feet below top of casing)  
56.23 (post-development)

Time Started: 14:55  
Time Finished: 15:10

TIME	DTW	Pump (on/off)	Turb.	Temp.	pH	Cond.	DO	ORP	Flow	Comments
Initial Conditions	22.79	on	over	11.4	9.39	652	1.50	84.9		
1500	-	on	over	11.00	7.86	514.5	0.8	-67.6	18 gal	
1505	-	on	179	10.7	7.93	523	1.35	-135.9		25 gallons
1510	-	on	117	10.8	7.78	523.7	2.66	-158.5		45 gallons

NOTES: 33.03 ft water x 0.16 gal/ft = 5.28 gal per volume  
~8.5 well volumes purged

# WELL DEVELOPMENT DATA SHEET

Well Number: MS-MW-10 Date: 4/3/19

Project Name: HF-Mechanics Project Number: 0378075.04

Weather Conditions: 43°F, clear, calm

Development Technique  
Inertial

Static water level before development: 5.58 (feet below top of casing)  
Bottom of well: 7.41 (feet below top of casing)

Time Started: 8:30  
Time Finished: 10:05

7.45 (post development)

TIME	DTW	Pump (on/off)	Turb.	Temp.	pH	Cond.	DO	ORP	Flow	Comments
Initial Conditions	5.58	on	over							Some foam
9:50	Dry									2.5 gallons purged
10:05	7.24									2.6 gallons purged = ~8 well volumes

NOTES: 1 well volume = 0.30 gallons  
3 well volumes = 0.90 gallons

# WELL DEVELOPMENT DATA SHEET

Well Number: MSMW-11      Date: 4/2/19      Project Name: HF-Mechanic St      Project Number: 0378075.04

Weather Conditions: 37° Clear Calm

Development Technique: ~~Dual Air Lift~~ 0.23 1.46ft<sup>3</sup> Water x 0.16 = 0.037gal  
Inserted

Static water level before development: 4.28 (feet below top of casing)  
 Bottom of well: 5.74 (feet below top of casing)

Time Started: 9:50  
 Time Finished: \_\_\_\_\_

TIME	DTW	Pump (on/off)	Turb.	Temp.	pH	Cond.	DO	ORP	Flow	Comments
Initial Conditions	4.28	on	over							unable to record parameters Purge < 1gt at time Unable to fill YSI containers Purge 1gal manually

NOTES: 0.23 1.46ft<sup>3</sup> of Water x 0.16 gal/ft = 0.23 gal volume

# WELL DEVELOPMENT DATA SHEET

Well Number: MS-MW-012 Date: 4/2/19

Project Name: HF-Mechanics Project Number: 0378075.04

Weather Conditions: 37°F, clear, calm

Development Technique

Dual Airlift

*0.0ft water  
0.0 x 0.16 = 0. gal*

Static water level before development: Dry (feet below top of casing)  
Bottom of well: 14.79 (feet below top of casing)

Time Started: 9:30  
Time Finished: \_\_\_\_\_

TIME	DTW	Pump (on/off)	Turb.	Temp.	pH	Cond.	DO	ORP	Flow	Comments
Initial Conditions										

NOTES: Well was dry. No water.

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# WELL DEVELOPMENT DATA SHEET

Well Number: ms-mw-013 Date: 04/02/19

Project Name: HF-Mechanist Project Number: 0378035

Weather Conditions: 49, Clear Wind ± 10 mph

Development Technique  

Inert

Static water level before development: 24.91 (feet below top of casing)  
 Bottom of well: 26.32 (feet below top of casing)

Time Started: 13  
 Time Finished: \_\_\_\_\_

TIME	DTW	Pump (on/off)	Turb.	Temp.	pH	Cond.	DO	ORP	Flow	Comments
Initial Conditions										Unable to bring water to surface Very small hydraulic head and PVC debris down hole

NOTES: 1.4 Ft water x 0.16 gal/ft = 0.23 gal/val

# WELL DEVELOPMENT DATA SHEET

Well Number: MS-MW-014 Date: 4/2/19

Project Name: HF=Merckton Project Number: 0378075.09

Weather Conditions: 49 F Sunny, calm

Development Technique  
Dual Airlift / Inertial

Static water level before development: 29.40 (feet below top of casing)  
 Bottom of well: 37.96 (feet below top of casing)

Time Started: 15:35  
 Time Finished: 16:46

TIME	DTW	Pump (on/off)	Turb.	Temp.	pH	Cond.	DO	ORP	Flow	Comments
Initial Conditions	29.40	on	79	14.1	7.84	996	2.15	73.7		
15:45										Water not reaching surface
15:52	-	on		13.3	6.97	1010	2.22	-49.9		
16:20	-	on	0.25	13.6	6.80	1006	4.02	-8		
16:46	-	on	1752 Au	13.9	6.83	1042	12.8	-51.6		

NOTES: PID Headspace = 11.8    AMPIent = 0.2ppm  
11.56 Ft water x 0.16 gal/ft = 1.85 gal/col = 5.56  
Very slight sheen on purge water

# WELL DEVELOPMENT DATA SHEET

Well Number: MSmw-015 Date: 4/2/19

Project Name: HF-Mechanic St Project Number: 0378075.01

Weather Conditions: 37 Clear Calm

Development Technique

Duct F.-Lift

Static water level before development: 27.15 (feet below top of casing)  
 Bottom of well: 52.15 (feet below top of casing)

Time Started: 10:25  
 Time Finished: \_\_\_\_\_

TIME	DTW	Pump (on/off)	Turb.	Temp.	pH	Cond.	DO	ORP	Flow	Comments
Initial Conditions	27.15	on	over							Open Grey Turbid
1040	—	on	over	13.3	9.38	783	15.1	-15.6		~ 10 gal
1055	—	on	over	15.0	8.22	608.1	14.8	-69.3		~ 18 gal
1110	—	on	over	13.8	7.81	658.6	0.65	-129.6		~ 30 gal
1125	30.70	on	over	13.4	7.63	667	1.04	-117.4		~ 36 gal (DTB: 53.3)

NOTES: 25 ft water x 0.16 = 4.0 gal/volume  
0.2 ppm head space.



# WELL DEVELOPMENT DATA SHEET

Well Number: MS-MW-018 Date: 4/2/19

Project Name: 0378075.04 Project Number: HF-Mechanic St.

Weather Conditions: 49°F, sunny, winds ±15 mph

Development Technique  
~~Dual Air Lift~~  
Check Valve

Static water level before development: 20.19 (feet below top of casing)  
 Bottom of well: 25.13 (feet below top of casing)

Time Started: \_\_\_\_\_  
 Time Finished: \_\_\_\_\_

TIME	DTW	Pump (on/off)	Turb.	Temp.	pH	Cond.	DO	ORP	Flow	Comments
Initial Conditions	20.19	on								No Water to surface Start Check Valve
15:05	20.19	on	over	11.3	8.96	1148	2.68	29.3		<del>SD</del> Dry after ~1 gal purged
16:02										Dry after another ~1 gal purged
17:00										Dry after ~0.5 gal purged ~2.5 purged

NOTES: 4.94 ft water x 0.16 gal/ft = 0.79 gal/vol = 2.37/3 vol  
No water to surface

# WELL DEVELOPMENT DATA SHEET

Well Number: MS-MW-019 Date: 4/2/19

Project Name: HF-Mechanics Project Number: 0378075.04

Weather Conditions: 49°F, clear, winds ± 10mph

Development Technique

Dual Air Lift / Sealed

Static water level before development: 10.72 (feet below top of casing) 4/3/19  
 Bottom of well: 21.11 (feet below top of casing) 15.40  
21.59

Time Started: 13:30  
 Time Finished: 9:19 (4/3/19)

TIME	DTW	Pump (on/off)	Turb.	Temp.	pH	Cond.	DO	ORP	Flow	Comments
Initial Conditions	10.72	on	Over							
10:40	16.72	on	over	10.3	9.29	1084	34.6	69.1		
4/3/19 8:45	15.40	on	over	8.2	9.11	1130	11.6	-124.9		4/3/19
8:55	—	on	over	7.7	8.98	1088	2.34	-135.4	1 gal	
9:05	20.70	off	over	7.7	8.99	970	1.04	-172.3	2 gal	well dry @ 9:10
9:19	20.35	on	over	7.8	8.96	968	1.05	-172	2.5 gal	DTW 20.35 @ 9:20
										no more water to surface
										2.5 volume

NOTES: 10.39 ft water x 0.16 gal/ft = 1.66 gal / volume  
~~10.50 water to dry~~  
10.50 Water level decrease (17' bgs) unable to reach surface  
recharge for 25 min.  
 Final DTW 21.58

## Low-Flow Groundwater Sampling Form



Site Name: Hoosick Falls - Mechanic Street  
 Project No.: 0378075.04

Monitoring Well: MS-MW-4	Area: MS - L&A, lawn
Date: 4/24/2019	Sampling Device: Pci pump & HDPE
Sampling Personnel: E. Marcus	
Weather Conditions: Cloudy, windy, ~55°	
Time: 10:30	

Total Depth (TD) <sup>1</sup> : 30.31'	Screen Length (feet): Unknown
Depth to Water (DTW): 7.91'	Well Diameter (inches): 4"
Total Volume Purged (USG): 2	Casing Type: PVC
Average Purge Rate: 150 mL/min	PID Headspace (ppm): 0.0
Tubing Type: HDPE	Measuring Point: TOC
Pump Intake (feet below MP): 25'	Color: Clear      Odor: none

Time (min)	DTW (feet)	Comments	Temp	SpC	DO	pH	Turb	ORP	Flow
			(°C)	(µS/cm <sup>3</sup> )	(mg/L)	(std units)	NTU	mV	(mL/min)
Stabilization Criteria <sup>2</sup>			+/- 3%	+/- 3%	+/- 10%	+/- 0.1 unit	+/- 10% <sup>3</sup>	+/- 10 mV	100-400
10:46	8.29	Initial	9.6	815	7.58	6.95	6.98	194.1	150
10:53	8.55	5	9.5	811	4.95	6.97	4.88	172.3	↓
10:58	8.92	10	9.5	812	4.27	7.02	4.07	157.0	
11:03	9.10	15	9.4	812	3.67	7.04	3.47	145.8	
11:08	9.29	20	9.5	812	3.17	7.05	4.44	143.1	
11:13	9.21	25	9.5	812	2.76	7.07	3.22	137.9	
11:16	9.4	30	9.5	812	2.60	7.07	3.06	136.1	
11:23	9.4	35	9.6	811	2.40	7.07	3.45	133.3	
		40							

EM

Sampling Time: 11:35

Sample ID: MS-MW-4 (04242019)

Analysis Requested:  
 PFAS, VOCs, -1.4,  
 Metals, Cyanide,  
 TOC, SVOCs, pH,  
 Perchlorate, PCBs

Filtered Y/N:  
 No

Preservative:  
 HCL, Nitric Acid,  
 NaOH

Additional Field Measurements

N/A

**Notes:**

- <sup>1</sup> = Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom.
- <sup>2</sup> = Stabilization criteria based on three most recent consecutive measurements.
- <sup>3</sup> = Plus or minus 10-percent when turbidity is over 10 NTUs.

## Low-Flow Groundwater Sampling Form



Site Name: Hoosick Falls - Mechanic Street  
 Project No.: 0378075.04

Monitoring Well: <u>MS-MW-8</u>	Area: <u>4J Property</u>
Date: <u>4/23/19</u>	Sampling Device: <u>Tubing</u>
Sampling Personnel: <u>JK</u>	
Weather Conditions: <u>Sunny, 70°</u>	
Time: <u>13:35</u>	

Total Depth (TD) <sup>1</sup> : <u>29.64</u>	Screen Length (feet): <u>20</u>
Depth to Water (DTW): <u>3.08'</u>	Well Diameter (inches): <u>2</u>
Total Volume Purged (USG): <u>1.426 gal</u>	Casing Type: <u>PVC</u>
Average Purge Rate: <u>120 mL/min</u>	PID Headspace (ppm): <u>0.0</u>
Tubing Type: <u>HDPE</u>	Measuring Point: <u>T<sub>0</sub>C</u>
Pump Intake (feet below MP): <u>25'</u>	Color: <u>Clear</u> Odor: <u>none</u>

Time: (min)	DTW: (feet)	Comments:	Temp	SpC	DO	pH	Turb	ORP	Flow
			(°C)	(µS/cm <sup>3</sup> )	(mg/L)	(std units)	NTU	mV	(mL/min)
Stabilization Criteria <sup>2</sup>			+/- 3%	+/- 3%	+/- 10%	+/- 0.1 unit	+/- 10% <sup>3</sup>	+/- 10 mV	100-400
13:55	3.24	Injial	10.0	0.790	2.02	7.46	61.25	14.9	120
14:00	3.40	6	9.6	0.800	1.23	7.35	30.07	12.5	↓
14:05	3.71	10	9.5	0.797	0.72	7.33	22.38	11.2	
14:10	3.92	15	9.5	0.797	0.39	7.32	20.22	8.7	
14:15	4.08	20	9.5	0.795	0.30	7.32	20.88	7.2	
14:20	4.27	25	9.2	0.794	0.30	7.30	19.23	6.3	
14:25	4.42	30	9.0	0.794	0.26	7.32	18.58	5.7	
14:30	4.62	35	9.0	0.794	0.23	7.30	15.97	5.0	
14:35	4.81	40	9.1	0.792	0.21	7.29	14.03	5.0	
14:40	4.94	45	9.2	0.794	0.20	7.28	14.57	4.1	

Sampling Time: 15:00

Sample ID: MS-MW-8 (04232019)      Analysis Requested: PFAS, Cyanide, VOC's, pH, 1,4, Metals, SVOC, Pesticides, PCBs      Filtered Y/N: No      Preservative: HCl, Nitric Acid, NaOH

**Notes:**

- <sup>1</sup> = Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom.
- <sup>2</sup> = Stabilization criteria based on three most recent consecutive measurements.
- <sup>3</sup> = Plus or minus 10-percent when turbidity is over 10 NTUs.

## Low-Flow Groundwater Sampling Form



Site Name: Hoosick Falls - Mechanic Street  
 Project No.: 0378075.04

Monitoring Well: MS-MW-008B	Area: 4J Property
Date: 4/23/19	Sampling Device: Tubing
Sampling Personnel: JE	
Weather Conditions: Sunny, 65°F	
Time: 10:38	

Total Depth (TD) <sup>1</sup> : 55.19'	Screen Length (feet): 5'
Depth to Water (DTW): 22.56'	Well Diameter (inches): 2"
Total Volume Purged (USG): 1.268 gal	Casing Type: PVC
Average Purge Rate: 120 mL/min	PID Headspace (ppm): 0.0
Tubing Type: HDPE	Measuring Point: Top
Pump Intake (feet below MP): 50'	Color: clear      Odor: None

Time (min)	DTW (feet)	Comments:	Temp	SpC	DO	pH	Turb	ORP	Flow
			(°C)	(µS/cm <sup>3</sup> )	(mg/L)	(std units)	NTU	mV	(mL/min)
Stabilization Criteria <sup>2</sup>			+/- 3%	+/- 3%	+/- 10%	+/- 0.1 unit	+/- 10% <sup>3</sup>	+/- 10 mV	100-400
10:50	22.75	Initial	12.5	0.554	1.43	8.36	8.34	11.6	120
10:55	22.70	5	12.2	0.631	0.49	8.22	8.71	-24.5	↓
11:00	22.71	10	12.1	0.521	0.37	8.22	9.28	-72.7	
11:05	22.65	15	12.4	0.518	0.33	8.01	8.86	-126.6	
11:10	22.67	20	12.6	0.522	0.31	8.26	7.86	-146.2	
11:15	22.66	25	12.4	0.521	0.30	8.21	6.72	-170.8	
11:20	22.67	30	12.3	0.519	0.32	8.17	7.84	-181.1	
11:25	22.69	35	12.3	0.518	0.30	8.20	7.77	-187.9	
11:30	22.67	40	12.3	0.518	0.30	8.15	8.17	-195.1	

Sampling Time: 11:40

Sample ID: MS-MW-008B (04232019)	Analysis Requested:	Filtered Y/N:	Preservative:
Additional Field Measurements	PFAS VOC's 1,4 Metals Cyanide TOC pH SVOC's Pesticides PCB's	No	HCl Nitric Acid NaOH

**Notes:**  
<sup>1</sup> = Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom.  
<sup>2</sup> = Stabilization criteria based on three most recent consecutive measurements.  
<sup>3</sup> = Plus or minus 10-percent when turbidity is over 10 NTUs.

\* MS/MSD Collected

## Low-Flow Groundwater Sampling Form



Site Name: Hoosick Falls - Mechanic Street  
 Project No.: 0378075.04

Monitoring Well: <u>MS-MW-9</u>	Area: <u>4J Property</u>
Date: <u>4/23/19</u>	Sampling Device: <u>Tubing</u>
Sampling Personnel: <u>JE</u>	
Weather Conditions: <u>Sunny, 72°</u>	
Time: <u>15:42</u>	

Total Depth (TD) <sup>1</sup> : <u>23.90</u>	Screen Length (feet): <u>5'</u>
Depth to Water (DTW): <u>15.58'</u>	Well Diameter (inches): <u>2</u>
Total Volume Purged (USG): <u>1.902 gal</u>	Casing Type: <u>PVC</u>
Average Purge Rate: <u>120 mL/min</u>	PID Headspace (ppm): <u>0.0</u>
Tubing Type: <u>HDPE</u>	Measuring Point: <u>To S</u>
Pump Intake (feet below MP): <u>21'</u>	Color: <u>murky grey/clear</u> Odor: <u>none</u>

Time (min)	DTW: (feet)	Comments:	Temp	SpC	DO	pH	Turb	ORP	Flow
			(°C)	(µS/cm <sup>3</sup> )	(mg/L)	(std units)	NTU	mV	(mL/min)
			+/- 3%	+/- 3%	+/- 10%	+/- 0.1 unit	+/- 10% <sup>3</sup>	+/- 10 mV	100-400
<del>16:05</del>	<u>15.82</u>	<u>Initial</u>	<u>13.8</u>	<u>1.268</u>	<u>2.01</u>	<u>6.77</u>	<u>312.0</u>	<u>92.9</u>	<u>120</u>
<u>16:10</u>	<u>16.39</u>	<u>5</u>	<u>13.3</u>	<u>1.269</u>	<u>2.14</u>	<u>6.88</u>	<u>268.0</u>	<u>92.6</u>	↓
<u>16:15</u>	<u>16.07</u>	<u>10</u>	<u>13.1</u>	<u>1.272</u>	<u>1.96</u>	<u>6.86</u>	<u>90.2</u>	<u>91.8</u>	
<u>16:20</u>	<u>16.76</u>	<u>15</u>	<u>13.4</u>	<u>1.274</u>	<u>2.08</u>	<u>6.88</u>	<u>73.4</u>	<u>91.3</u>	
<u>16:25</u>	<u>16.99</u>	<u>20</u>	<u>13.8</u>	<u>1.273</u>	<u>1.63</u>	<u>6.90</u>	<u>85.4</u>	<u>90.5</u>	
<u>16:30</u>	<u>17.22</u>	<u>25</u>	<u>13.7</u>	<u>1.288</u>	<u>1.44</u>	<u>6.86</u>	<u>86.1</u>	<u>90.0</u>	
<u>16:35</u>	<u>17.48</u>	<u>30</u>	<u>13.8</u>	<u>1.289</u>	<u>1.32</u>	<u>6.83</u>	<u>86.7</u>	<u>89.9</u>	
<u>16:40</u>	<u>17.68</u>	<u>35</u>	<u>14.0</u>	<u>1.293</u>	<u>1.32</u>	<u>6.86</u>	<u>82.3</u>	<u>89.9</u>	
<u>16:45</u>	<u>17.93</u>	<u>40</u>	<u>13.8</u>	<u>1.298</u>	<u>1.32</u>	<u>6.88</u>	<u>87.3</u>	<u>88.9</u>	
<u>16:50</u>	<u>18.15</u>	<u>45</u>	<u>13.7</u>	<u>1.308</u>	<u>1.31</u>	<u>6.87</u>	<u>101.0</u>	<u>88.8</u>	
<u>16:55</u>	<u>18.30</u>	<u>50</u>	<u>13.5</u>	<u>1.308</u>	<u>1.35</u>	<u>6.89</u>	<u>103.0</u>	<u>88.9</u>	
<u>17:00</u>	<u>18.63</u>	<u>55</u>	<u>13.5</u>	<u>1.309</u>	<u>1.30</u>	<u>6.91</u>	<u>92.2</u>	<u>89.0</u>	
<u>17:05</u>	<u>18.81</u>	<u>60</u>	<u>13.6</u>	<u>1.308</u>	<u>1.32</u>	<u>6.90</u>	<u>90.8</u>	<u>88.8</u>	

Sampling Time: 17:45

Sample ID: MS-MW-9(04232019)

Analysis Requested:

Filtered Y/N: No

Preservative:

Additional Field Measurements

N/A

PFAS    Cyanide  
 VOCs    TOC  
 1,4      pH  
 Metals    SVOCs  
           Pesticide  
           PCBs

HCl  
 Nitric Acid  
 NaOH

**Notes:**

- <sup>1</sup> = Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom.
- <sup>2</sup> = Stabilization criteria based on three most recent consecutive measurements.
- <sup>3</sup> = Plus or minus 10-percent when turbidity is over 10 NTUs.

\* Turbidity would not go below ~~73.4~~ 73.4 NTU. Possibly an issue with the turbidity meter because water seemed very clear.

## Low-Flow Groundwater Sampling Form



Site Name: Hoosick Falls - Mechanic Street  
 Project No.: 0378075.04

Monitoring Well: MS-MW-010	Area: 4 J's
Date: 4/23/19	Sampling Device: Peristaltic pump
Sampling Personnel: D. Vause	
Weather Conditions: 60s, clear, winds ± 5 mph SW	
Time: 16:28	

Total Depth (TD) <sup>1</sup> : 7.51'	Screen Length (feet): 5'
Depth to Water (DTW): 2.99'	Well Diameter (inches):
Total Volume Purged (USG):	Casing Type: PVC
Average Purge Rate: 100 mL/gallon min	PID Headspace (ppm): 0.0
Tubing Type: HDPE	Measuring Point: TOC
Pump Intake (feet below MP): ~7'	Color: Colorless Odor: None

Time: (min)	DTW: (feet)	Comments:	Temp	SpC	DO	pH	Turb	ORP	Flow
			(°C)	(µS/cm³)	(mg/L)	(std units)	NTU	mV	(mL/min)
			+/- 3%	+/- 3%	+/- 10%	+/- 0.1 unit	+/- 10% <sup>3</sup>	+/- 10 mV	100-400
16:42	3.19		9.4	644.8	10.21	7.54	6.97	57.6	100
16:47	3.36		9.5	588.9	8.89	7.57	7.62	55.8	100
16:52	3.45		9.5	514.9	7.19	7.59	2.96	55.0	100
16:57	3.61		10.1	468.9	7.09	7.50	2.44	59.5	100
17:02	3.74		10.5	474.5	6.96	7.50	3.20	62.6	100
17:07	3.85		10.2	494.4	6.87	7.51	1.82	66.0	100
17:12	3.95		9.9	513.4	6.80	7.51	6.38	66.9	100
17:17	4.01		10.2	522.4	6.77	7.53	3.17	67.3	100
17:22	4.11		10.1	533.8	6.56	7.54	3.29	87.9	100
17:27	4.21		10.0	537.2	6.61	7.54	3.66	68.5	100
IV									

Sampling Time: 17:30

Sample ID: MS-MW-010(04232019)

Analysis Requested:

Filtered Y/N:

Preservative:

PFAS  
 VOCs  
 1,4-dioxane  
 Metals  
 Cyanide  
 TOC  
 pH  
 SVOCs  
 Pesticides  
 PCBs

No

HCl  
 Nitric Acid  
 NaOH  
 HCl  
 —  
 —  
 —

Additional Field Measurements

**Notes:**

- <sup>1</sup> = Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom.
- <sup>2</sup> = Stabilization criteria based on three most recent consecutive measurements.
- <sup>3</sup> = Plus or minus 10-percent when turbidity is over 10 NTUs.

## Low-Flow Groundwater Sampling Form



Site Name: Hoosick Falls - Mechanic Street  
 Project No.: 0378075.04

Monitoring Well: <u>MS-MW-011</u>	Area: <u>Balcaitis Property</u>
Date: <u>4/24/19</u>	Sampling Device: <u>Tubing</u>
Sampling Personnel: <u>JE</u>	
Weather Conditions: <u>Cloudy, 47° F</u>	
Time: <u>0920</u>	

Total Depth (TD) <sup>1</sup> : <u>5.74'</u>	Screen Length (feet): <u>3</u>
Depth to Water (DTW): <u>4.20'</u>	Well Diameter (inches): <u>2</u>
Total Volume Purged (USG): <u>1,585 gal</u>	Casing Type: <u>PVC</u>
Average Purge Rate: <u>120 mL/min</u>	PID Headspace (ppm): <u>0.0</u>
Tubing Type: <u>HDPE</u>	Measuring Point: <u>T<sub>0</sub>C</u>
Pump Intake (feet below MP): <u>5.6'</u>	Color: <u>Murky gray / clear</u> Odor: <u>None</u>

Time (min)	DTW (feet)	Comments	Temp	SpC	DO	pH	Turb	ORP	Flow	
			(°C)	(uS/cm <sup>3</sup> )	(mg/L)	(std units)	NTU	mV	(mL/min)	
Stabilization Criteria <sup>2</sup>			+/- 3%	+/- 3%	+/- 10%	+/- 0.1 unit	+/- 10% <sup>3</sup>	+/- 10 mV	100-400	
0930	4.64	Initial	9.0	1.994	1.24	7.14	1572	98.5	120	
0935	4.96	5	8.9	1.952	0.58	7.24	790	11.7	↓	
0940	5.15	10	8.8	1.688	0.43	7.35	633	-79.2		
0945	5.29	15	8.6	1.554	0.44	7.36	650	-90.2		
0950	5.33	20	8.8	1.433	0.43	7.32	781	-85.5		
0955	5.39	25	8.6	1.409	0.66	7.37	621	-88.6		
1000	5.51	30	8.7	1.401	0.68	7.31	718	-82.6		
1005	5.60	35	8.6	1.388	0.70	7.31	704	-80.0		
1010	—	<del>40</del> DRY	—	—	—	—	—	—		—
1015	4.73	<del>40</del> Restart	8.8	1.118	0.70	7.35	58.1	-75.0		120
1030	5.10	<del>45</del> surge	8.7	1.057	0.61	7.30	55.6	-75.0		↓
1035	5.22	<del>48</del>	8.8	1.029	0.68	7.29	57.9	-76.1		
1040	5.38	50	8.6	1.021	0.52	7.27	36.6	-71.8		
1045	—	<del>55</del> DRY	—	—	—	—	—	—	—	

Sampling Time: 11:30

Sample ID: <u>MS-MW-011 (04242019)</u>	Analysis Requested:	Filtered Y/N:	Preservative:
	<u>PFAS TOC</u>	<u>No</u>	<u>HCl</u>
Additional Field Measurements	<u>VOCs Ph</u>		<u>NaOH</u>
	<u>Cyanide Pesticides</u>		<u>Nitric Acid</u>
	<u>1,4 dVOCs PCB</u>		
	<u>Metals</u>		

Notes:  
<sup>1</sup> = Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom.  
<sup>2</sup> = Stabilization criteria based on three most recent consecutive measurements.  
<sup>3</sup> = Plus or minus 10-percent when turbidity is over 10 NTUs.

33.7

\* Turbidity was ~~33.7~~ NTU at time of sampling.  
 \* Turbidity has remained ~~at~~ < 50 NTU throughout all sampling.



## Low-Flow Groundwater Sampling Form



Site Name: Hoosick Falls - Mechanic Street  
 Project No.: 0378075.04

Monitoring Well: MS-MW-013	Area: Dakaltis Property
Date: 4/24/14	Sampling Device: Peristaltic pump
Sampling Personnel: J. Vause	
Weather Conditions: 50°F, overcast, winds ± 10 mph W	
Time: 10:35	

Total Depth (TD) <sup>1</sup> : 26.20'	Screen Length (feet): 10
Depth to Water (DTW): 25.62'	Well Diameter (inches): 2
Total Volume Purged (USG): NA	Casing Type: PVC
Average Purge Rate: NA	PID Headspace (ppm): 0.0
Tubing Type: HDPE	Measuring Point: TOC
Pump Intake (feet below MP): NA	Color: NA      Odor: NA

Time (min)	DTW (feet)	Comments:	Temp (°C)	SpC (uS/cm <sup>3</sup> )	DO (mg/L)	pH (std units)	Turb NTU	ORP mV	Flow (mL/min)
Stabilization Criteria <sup>2</sup>			+/-	+/-	+/-	+/-	+/-	+/-	
			3%	3%	10%	0.1 unit	10% <sup>3</sup>	10 mV	100-400
		* Interface Probe came up with 1 ft of silt. No water on tape. No water in well to pump.							

Sampling Time:

Sample ID: Not sampled

Analysis Requested:

Filtered Y/N: No

Preservative:

Additional Field Measurements

**Notes:**

- <sup>1</sup> = Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom.
- <sup>2</sup> = Stabilization criteria based on three most recent consecutive measurements.
- <sup>3</sup> = Plus or minus 10-percent when turbidity is over 10 NTUs.

## Low-Flow Groundwater Sampling Form



Site Name: Hoosick Falls - Mechanic Street  
 Project No.: 0378075.04

Monitoring Well: MS-MW-014	Area: Sakaltis Property
Date: 4/24/19	Sampling Device: Peristaltic pump
Sampling Personnel: J. Vause	
Weather Conditions: 50s°F, overcast, winds ± 10mph W	
Time: 14:45	

Total Depth (TD) <sup>1</sup> : 38.44'	Screen Length (feet): 10
Depth to Water (DTW): 29.21'	Well Diameter (inches): 2
Total Volume Purged (USG): 0.5 gallons	Casing Type: PVC
Average Purge Rate: ~40 mL/min	PID Headspace (ppm): 0.0
Tubing Type: HDPE	Measuring Point: TOC
Pump Intake (feet below MP): ~32	Color: Colorless Odor: None

Time (min)	DTW (feet)	Comments:	Temp	SpC	DO	pH	Turb	ORP	Flow
			(°C)	(µS/cm <sup>3</sup> )	(mg/L)	(std units)	NTU	mV	(mL/min)
			+/- 3%	+/- 3%	+/- 10%	+/- 0.1 unit	+/- 10% <sup>3</sup>	+/- 10 mV	100-400
15:41	29.36		13.62	929	5.18	6.62	1.94	52.3	~40
15:46	29.38		13.35	943	5.03	6.65	2.09	42.3	~40
15:51	29.37		13.45	942	2.73	6.68	1.61	26.9	~40
15:56	29.38		13.45	940	2.41	6.68	0.60	24.7	~40
16:01	29.37		13.37	939	2.01	6.69	0.83	21.8	~40
16:06	29.37		13.56	936	1.23	6.70	0.88	18.2	~40
16:11	29.37		13.41	935	1.04	6.71	1.27	14.9	~40
16:16	29.37		13.27	934	0.79	6.73	0.53	11.9	~40
16:21	29.37		13.33	932	0.70	6.72	0.83	11.1	~40
16:26	29.37		13.13	935	0.54	6.73	0.68	9.3	~40

(JV)

Sampling Time: 16:30

Sample ID: MS-MW-014(04242019)      Analysis Requested: PFAS, VOCs, 1,4-Dioxane, Metals/Hg, Cyanide, TOC, SVOCs, pH, PCBs, Pesticides      Filtered Y/N: No      Preservative: HCl, Nitric Acid, NaOH

Additional Field Measurements: - Pump cannot overcome head, flow is sporadic

Notes:  
<sup>1</sup> = Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom.  
<sup>2</sup> = Stabilization criteria based on three most recent consecutive measurements.  
<sup>3</sup> = Plus or minus 10-percent when turbidity is over 10 NTUs.

## Low-Flow Groundwater Sampling Form

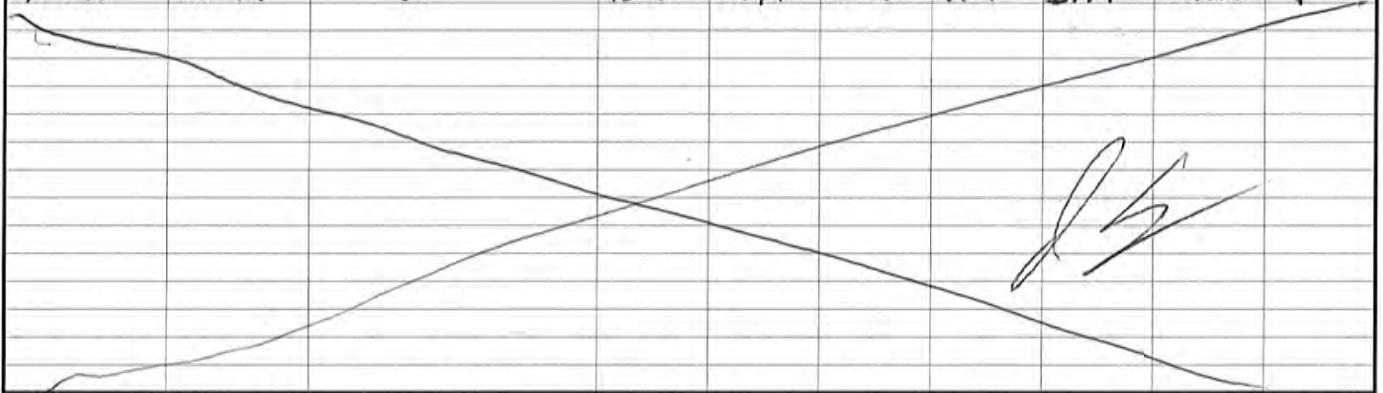


Site Name: Hoosick Falls - Mechanic Street  
 Project No.: 0378075.04

Monitoring Well: MS-MW-015	Area: Bakantis Property
Date: 4/24/19	Sampling Device: Tubing
Sampling Personnel: JE	
Weather Conditions: cloudy, 48°F	
Time: 14:00	

Total Depth (TD) <sup>1</sup> : 53.38'	Screen Length (feet): 10
Depth to Water (DTW): 25.19'	Well Diameter (inches): 2
Total Volume Purged (USG): 1.902 gal	Casing Type: PVC
Average Purge Rate: 120 mL/min	PID Headspace (ppm): 4.6
Tubing Type: HDPE	Measuring Point: T <sub>OC</sub>
Pump Intake (feet below MP): 50'	Color: clear      Odor: None

Time (min)	DTW (feet)	Comments	Temp	SpC	DO	pH	Turb	ORP	Flow
			(°C)	(µS/cm <sup>3</sup> )	(mg/L)	(std units)	NTU	mV	(mL/min)
Stabilization Criteria <sup>2</sup>			+/- 3%	+/- 3%	+/- 10%	+/- 0.1 unit	+/- 10% <sup>3</sup>	+/- 10 mV	100-400
14:45	25.37	Initial	13.5	0.672	0.69	7.38	26.6	-183.2	120
14:50	25.42	5	13.5	0.624	0.41	7.76	27.5	-275.6	
14:55	25.43	10	13.5	0.619	0.33	7.94	28.7	-290.9	
15:00	25.41	15	13.5	0.616	0.28	7.99	36.8	-296.8	
15:05	25.42	20	13.6	0.603	0.27	8.09	43.4	-304.9	
15:10	25.39	25	13.5	0.602	0.26	8.14	50.4	-306.1	
15:15	25.36	30	13.4	0.601	0.28	8.12	55.0	-303.6	
15:20	25.39	35	13.4	0.600	0.21	8.09	62.5	-307.3	
15:25	25.38	40	13.5	0.599	0.22	8.11	64.7	-316.7	
15:30	25.40	45	13.5	0.598	0.23	8.11	60.8	-322.2	
15:35	25.41	50	13.4	0.597	0.21	8.14	66.6	-315.2	
15:40	25.41	55	13.4	0.596	0.20	8.15	57.4	-333.4	
15:45	25.42	60	13.4	0.594	0.20	8.17	61.9	-346.2	



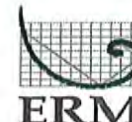
Sampling Time: 16:30

Sample ID: MS-MW-015 (04242019)	Analysis Requested:	Filtered Y/N:	Preservative:
MS-DUP (04242019)	PFA's      T <sub>OC</sub>	No	HCl
Additional Field Measurements	VOC's      PCB's		NaOH
	Cyanide      Pesticides		Nitric Acid
	1,4      Metals		
	svoc's      Ph		

Notes:  
<sup>1</sup> = Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom.  
<sup>2</sup> = Stabilization criteria based on three most recent consecutive measurements.  
<sup>3</sup> = Plus or minus 10-percent when turbidity is over 10 NTUs.

\* Turbidity would not go below 50 NTU although stabilized between 50 and 60 NTU.  
 \* Duplicate taken

### Low-Flow Groundwater Sampling Form



Site Name: Hoosick Falls - Mechanic Street  
 Project No.: 0378075.04

Monitoring Well: MS-MW-018	Area: 4 JS
Date: 4/23/19	Sampling Device: Peristaltic pump
Sampling Personnel: J. Vause / E. Marcus	
Weather Conditions: 60s, clear, winds ± 5 mph SW	
Time: 1345	

Total Depth (TD) <sup>1</sup> : 25.21'	Screen Length (feet): 5'
Depth to Water (DTW): 20.32'	Well Diameter (inches): 2
Total Volume Purged (USG): 2.6 gallons	Casing Type: PVC
Average Purge Rate: 120 mL/min	PID Headspace (ppm): 0.1
Tubing Type: HDPE	Measuring Point: TOC
Pump Intake (feet below MP): 2.3' → 2.4' → 2.4.5'	Color: Clear/gray Odor: None

Time (min)	DTW (feet)	Comments:	Temp	SpC	DO	pH	Turb	ORP	Flow	
			(°C)	(µS/cm <sup>3</sup> )	(mg/L)	(std units)	NTU	mV	(mL/min)	
Stabilization Criteria <sup>2</sup>			+/- 3%	+/- 3%	+/- 10%	+/- 0.1 unit	+/- 10% <sup>3</sup>	+/- 10 mV	100-400	
1350	21.1	Initial	14.4	819	1.86	7.37	X	-75.4	120	
1355	21.31	5	14.4	819	1.96	7.33	Max	-74.7	↓	
1400	21.55	10	13.9	844	1.84	7.36	Max	-69.1		
1405	21.90	15	13.4	795	1.76	7.38	877	-68.0		
1410	22.44	20	13.0	817	1.46	7.44	968	-62.6		
1415	22.90	25	13.0	828	1.19	7.49	max	-60.0		
1420	23.20	30	13.3	824	1.16	7.51	max	-68.9		
1425	23.55	35	13.0	813	1.00	7.46	324	-69.7		
1430	23.95	40	13.3	791	1.03	7.41	412	-65.4		
1435	24.20	45	14.0	817	0.94	7.42	Max	-73.5		
1440	24.60	50	13.2	865	0.96	7.47	Max	-71.4		
1445	24.75	55	13.4	821	0.93	7.54	Max	-73.0		
1450	24.85	60	14.2	905	2.23	7.61	max	-72.0		
<del>1455</del>		well purged dry.	14.9	929	3.40	7.58		-69.7		

Spoke to CW. Will follow same procedure as MW019. 3rd volumes have been purged. 1 vol is .8 gal and have ~2.6 gal.

Sampling Time: 16:40

Sample ID: MS-MW-016(04232019)

Analysis Requested:  
 PFAS, VOCs, 1,4,  
 Metals, Cyanide,  
 TOC, pH, SwCs,  
 PCBs, Pesticides

Filtered Y/N:  
 No

Preservative:  
 HCl, Nitric  
 acid, MnO<sub>2</sub>

Additional Field Measurements

N/A

**Notes:**

- <sup>1</sup> = Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom.
- <sup>2</sup> = Stabilization criteria based on three most recent consecutive measurements.
- <sup>3</sup> = Plus or minus 10-percent when turbidity is over 10 NTUs.

\* Turb. meter is reading "detector signal too low"

## Low-Flow Groundwater Sampling Form



Site Name: Hoosick Falls - Mechanic Street  
 Project No.: 0378075.04

Monitoring Well: MS-MW-019	Area: Walls on northern portion of property
Date: 4/23/2019	Sampling Device: Tubing
Sampling Personnel: E. Marcus & S. Edmunds	
Weather Conditions: Sunny, R650	
Time: 09:00	

Total Depth (TD) <sup>1</sup> : 21.62' from top of PVC	Screen Length (feet): 10'
Depth to Water (DTW): 12.1'	Well Diameter (inches): 2"
Total Volume Purged (USG): ~3 gal	Casing Type: PVC
Average Purge Rate: 300 mL/min	PID Headspace (ppm): 0.1
Tubing Type: HDPE	Measuring Point: Top of PVC
Pump Intake (feet below MP): 11'	Color: Brownish      Odor: N/A

Time (min)	DTW (feet)	Comments:	Temp	SpC	DO	pH	Turb	ORP	Flow
			(°C)	(µS/cm <sup>3</sup> )	(mg/L)	(std units)	NTU	mV	(mL/min)
Stabilization Criteria <sup>2</sup>			+/- 3%	+/- 3%	+/- 10%	+/- 0.1 unit	+/- 10% <sup>3</sup>	+/- 10 mV	100-400
09:08	12.81	Initial	8.20	9.05	1.12	8.31	128	26.1	100-300
09:08	14.53	5 min	8.50	7.97	1.17	8.21	64.7	54.4	↓
09:13	15.39	10 min	8.00	6.52	1.28	7.72	62.7	18.4	
09:16	16.21	15 min	8.10	6.50	0.93	8.08	53.7	6.0	
09:23	17.12	20 min	8.00	7.79	0.80	8.40	287.0	-0.7	
09:26	17.60	25 min	8.60	6.66	0.67	8.67	429.0	-25.1	
09:33	18.51	30 min	8.50	0.458	0.75	8.63	Max	-6.7	
09:36	19.15	35 min	8.7	0.999	0.57	9.00	Max	-6.3	
09:43	19.91	40 min	8.8	0.959	0.88	8.83	Max	-17.9	
09:48	20.1'	45 min	10.9	0.960	6.27	8.67	Max	-3.6	
09:53	20.1'	50 min	13.3	0.933	6.82	8.64	Max	36.7	
09:58	21.5	55	14.1	0.949	7.66	8.76	Max	32.0	
10:03	21.5	Comm.	10.2	1.027	6.30	8.95	Max	26.6	
10:08		65	11.9	0.989	6.36	8.92	Max	39.1	
10:13		70	13.1	0.989	6.32	8.90	Max	52.0	
10:38		75	14.2	0.966	6.35	8.66	Max	61.6	
			10.5	1.041	6.36	8.60	Max	67.6	

well purged dry, sent under three volumes retrieved, spoke to CW on phone. will let well recharge and sample in the afternoon.

EM

Sampling Time: 09:30

Sample ID: MS-MW-019 (04242019)      Analysis Requested: PFAS, VOCs, Minimum      Filtered Y/N: No      Preservative: W HCl, NaOH, Nitric Acid

Additional Field Measurements: N/A      Volume on oil, 4, TOC, Cyanide, pH, Pesticides and PCB, SVOCs, Metals/Hg

Notes:  
<sup>1</sup> - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom.  
<sup>2</sup> - Stabilization criteria based on three most recent consecutive measurements.  
<sup>3</sup> - Plus or minus 10-percent when turbidity is over 10 NTUs.

\* Gauged Wednesday morning. WL @ 19.6' from TOC

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